FINANCIAL TIMES

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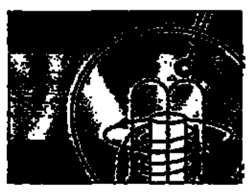

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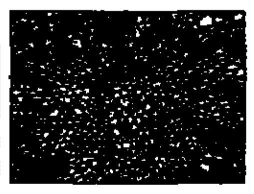

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WORLD NEWS

Fischer calls for EU political union to follow the euro

German foreign minister and deputy chancellor Joschka Fischer called for political union to become the goal of the EU as an essential counterpart to the introduction of the euro. **Europe, Page 2**

Ecevit outlines secularist policy
Bulent Ecevit, Turkey's new prime minister, outlined a staunchly secularist programme and vowed to follow the principles of Mustafa Kemal Ataturk, founder of the modern Turkish state. **Europe, Page 3**

Cresson under growing pressure
Edith Cresson, the former French prime minister, was coming under increasing pressure from the European parliament to resign as the European Commission battled to avoid being voted out of office. **Europe, Page 2**

Mystery of China's missing billions
China's foreign exchange reserves increased by just \$5.1bn to \$145bn last year, raising the embarrassing question of where most of \$88.9bn in reported trade and investment gains has gone. **Asia-Pacific, Page 6**

US warns Japan over steel
The US warned Japan to cut steel exports quickly or face retaliatory action, as tensions between Washington and Tokyo moved to the centre of an escalating dispute. **Page 12**

Police seek euro conman
Barcelona police have been investigating a conman trying to persuade elderly people their pesetas are about to become worthless and need changing into euros. **Europe, Page 2**

Netanyahu attacked over spending
Israeli opposition leaders criticised prime minister Benjamin Netanyahu for launching a spending spree ahead of May 17 elections. **International, Page 4; Observer, Page 11**

Elton John issues negligence writ
Musician Elton John issued a writ alleging negligence against Andrew Haydon, former director of William A. Bong, his master company, and PricewaterhouseCoopers. **Britain, Page 7**

Russian Communist Party split
A spit threatens Russia's Communist party after a group of prominent leftwingers said they intended to contest parliamentary elections on a separate platform. **Europe, Page 3**

US makes nuclear test ban priority
US President Clinton's national security adviser said US ratification of the treaty banning nuclear testing would be a priority this year. **International, Page 4**

French inflation lowest since 1954
France ended 1998 with inflation running at an annualised 0.3 per cent, the lowest rate recorded since 1954. **Europe, Page 2**

Austria rejects Brussels budget call
The Austrian government rejected a call by the European Commission for stricter budgetary discipline. Europe, Page 2

In Hebrew, for 'euro' read 'arrow'
Israeli lexicographers have decided that the euro will be pronounced and spelled in Hebrew as "arrow".

BUSINESS NEWS

Prada makes \$140m by selling stake in Gucci to LVMH

Prada, the Italian fashion group, made a profit of \$140m by selling its 9.5 per cent stake in rival Gucci to LVMH, the French luxury goods group. **Companies and Markets, Page 13**

China is heading a trio of emerging market borrowers planning to launch bonds denominated in euros. The bonds would be the first in the currency by sovereign borrowers from emerging markets since its creation. **Page 12; Bonds, Page 20**

Giat Industries of France and Vickers of the UK took a step towards rationalisation of Europe's armoured vehicle industry by signing a letter of intent to co-operate on marketing, design and development. **European companies, Page 16**

Arjo Wiggins Appleton announced a shake-up of its businesses in moves seen as a prelude to a possible break-up of the Anglo-French paper group. **Companies and Markets, Page 13; Observer, Page 11; Lex, Page 12, Origami tactics, Page 18**

Toyota Motor president Hiroshi Okuda is set to resign his post at Japan's leading carmaker after being nominated to head the Nikkeiren, a prominent group of business leaders. **Asia-Pacific companies, Page 14; Japanese carmakers, Page 14**

HypoVereinsbank of Munich and Commerzbank of Frankfurt are set to decide on the future of Adig, the German fund management group that they own. **International companies, Page 17**

Sweden's largest union movement called for an investigation into a sharp increase in the number of leading companies that are moving their headquarters overseas. **Europe, Page 3**

Tractebel, the Belgian energy group, declined to comment on reports that Gerard Mestrallet, chief executive of French giant Suez Lyonnaise des Eaux, would oust its chairman, Phillipe Bodson, by March. **European companies, Page 16; Lex, Page 12**

The Italian government said it would sell its remaining 4.5 per cent stake in Telecom Italia by the end of April. **International companies, Page 17**

Shares in UK pub and drinks companies were hit after one operator blamed the country's flu epidemic for a fall in Christmas sales. **UK companies, Page 18**

The World Trade Organisation decided that a panel should rule on whether the EU's amended banana import regime complies with previous WTO judgments. **Trade, Page 6**

ACE, the Bermuda-based insurance group, agreed to buy Cigna's global property and casualty insurance business for \$3.45bn in cash. **Companies and Markets, Page 13**

World Equity Markets
The latest trends and data from more than 50 national markets at a glance
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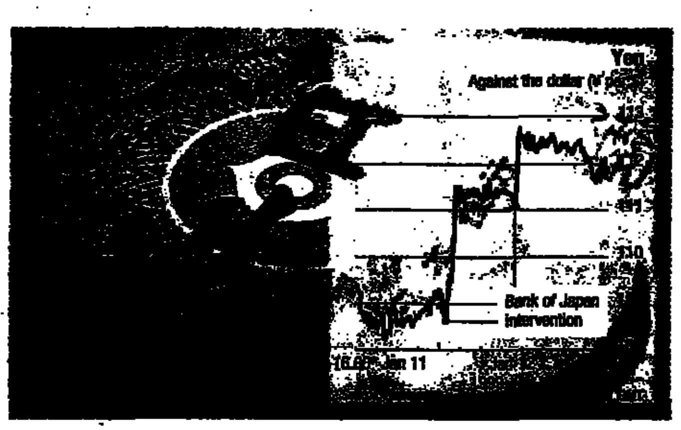
Japan buys dollars in policy U-turn

Bank acts to force yen down in Tokyo after complaints over rising currency's damage to exporters

By Paul Abrahams and Gillian Tett in Tokyo, Alan Beattie in London and Gerard Baker in Washington



The Japanese authorities intervened yesterday to support the dollar for the first time since 1995 in an apparent reversal of recent exchange rate policy.

The unilateral intervention forced the yen down against the US currency by Y4 to Y112.33 in Tokyo trading. It followed vociferous complaints from Japanese industrialists about the damage the sharp appreciation was causing exporters, and signs of unease inside the government.

Traders reported that the Bank of Japan had bought around \$1bn worth of dollars during the day from a range of Tokyo-based banks, although others later estimated the intervention at between \$2bn-\$3bn.

That was small compared with the \$20bn the Bank spent purchasing yen last spring to boost the Japanese currency. However, traders said that in a thin market the currency was more sensitive to signals or rumours of intervention.

Derek Halpenny, currency economist at the Bank of Tokyo-Mitsubishi in London, said the breach of the Y110 level had apparently been the spur to intervention.

"There was a fear that the yen would have gone on and approached the Y100 level against the dollar unless some action was taken," he said.

Analysts said the Bank of Japan seemed content with the yen in the Y110-120 range, and it was unlikely to intervene again unless the currency rose once more above Y110.

Last week Eisuke Sakakibara, Japan's vice-finance minister, appeared to endorse a stronger yen with comments that prompted the Japanese currency to jump to Y108 against the dollar on Monday, its highest level for 28 months.

His stance – and the yen's recent rise – caused dismay among senior officials in the Bank of Japan who have argued during the last year that the Japanese economy needed a weaker yen to boost growth.

Yesterday Mr Sakakibara - accompanying prime minister Keizo Obuchi on a European tour to bolster the yen's status alongside the dollar and the euro – modified his earlier remarks.

He said: "An excessively strong yen is undesirable, as is an excessively weak yen."

Hiromu Nonaka, chief cabinet secretary and the leading government spokesman, said after the intervention that "excessive appreciation or depreciation aren't something we want from the standpoint of the economy".

Internal economic models used by institutions such as the Economic Planning Agency imply that a 10 per cent sustained rise in the value of the currency could reduce growth more than 0.5 percentage points in a year.

This suggests the currency's recent rise would offset most of the impact of the government's huge stimulus package, say officials. In August the yen fell to a year low of Y147.24. By Monday it had appreciated 26 per cent.

Bank officials insist that a stronger yen is unlikely to help the banking sector because the banks have slashed overseas assets in recent months as part of their restructuring.

Bank of Japan data shows that Japanese banks' overseas assets fell to Y12,000bn in October to reach Y96,800bn. That is the lowest level for 15 years and Y46,000bn down on a year earlier.

The intervention came as trade tensions between Japan and the US intensified over steel and other manufactured exports.

Dollar-yen debate, Page 5; Martin Wolf, Page 10; Bonds, Page 20; Currencies, Page 21

Murdoch says new internet companies are overvalued

By John Gapper in London and Sheila McNulty in Kuala Lumpur

Rupert Murdoch, who heads News Corporation, the international media company, yesterday punctured the euphoria about internet stocks, saying many new companies in the industry were heavily overvalued and unlikely to meet profit projections.

His remarks came as internet stocks in New York broke their unprecedented rally of recent weeks, during which shares in companies such as Yahoo!, America Online and Amazon.com have often risen more than 10 per cent daily.

Mr Murdoch's scepticism is likely to fuel the growing debate about the valuation of internet companies that are unlikely to produce profits in the short term. The market valuation of AOL, the internet service provider, recently exceeded that of Walt Disney, the US media company.

Speaking in Singapore, Mr Murdoch said News Corp would "certainly not be making takeovers of large, or already overcapitalised companies". The internet was "not the death-knell of the old" among media companies, he added.

The strong rise in internet-related corporate valuation has been driven by investors' growing belief that groups such as AOL can transform distribution of information and entertainment, and persuade consumers to buy products on line.

Shares in Yahoo!, the search engine, which soared 21 per cent on Monday, fell back \$10¼ to \$404 in early trading in New York. Elsewhere in the sector, AOL was off \$5 at \$160 while Amazon.com, the on-line book store, was off \$16¾ at \$168.

Mr Murdoch, whose media conglomerate was founded on newspapers in Australia, said he was sceptical about the projected growth of such companies.

News Corp has been among the most cautious of the world's largest media companies in investing in internet enterprises. Bertelsmann, the German publishing group, has stakes in AOL and barnesandnoble.com, another online bookstore.

Mr Murdoch said News Corp's traditional competitors were being just as cautious and it did not "see any need to hurry this. The big stars of the internet like AOL, Amazon.com or Yahoo! were not the creation of old media companies".

Mr Murdoch said internet companies would exist alongside those in traditional media such as television and radio, but the internet would "destroy more businesses than it creates" by "wiping out the middlemen" in transactions.

He emphasised his company's ambitions in Asia, saying it was keen to show news programmes on its television networks such as Star TV in Asia, despite claims by critics that he censored news outlets to avoid offending China.

Mr Murdoch said he was still some way from reaching a deal to invest up to \$250m in a new subsidiary of Kirch Group, the loss-making Germany media group. Kirch has been seeking \$750m from investors to offset pay television losses.

Lex, Page 12
World stocks, Page 29

Face in the crowd: US defence secretary William Cohen, pictured visiting Yokota airbase near Tokyo, warned yesterday that Iraq would pay a price if it challenged US and British jets policing no-fly zones. Report, Page 4 Reuters

EU manufacturing declines suddenly

By Wolfgang Münchau in Frankfurt

European manufacturers suffered a sudden and accelerating decline in business activity during the fourth quarter last year, according to the first purchasing managers' index published for the euro-zone.

The figures may add to the pressure on the European Central Bank to cut interest rates early this year.

Gloom about Europe's manufacturing sector was corroborated yesterday by German data, showing a 2.3 per cent monthly drop in industrial production during November. The decline was largely due to a fall in orders from Asia and Latin America.

Yesterday's data suggest that the euro – the single currency launched on January 1 for 11 European economies – may have started in a far worse economic climate than thought.

According to NTC Research, a UK-based group that also publishes the PMI for the UK, the PMI in the euro-zone fell from 49.3 in October to 46.9 in December, against a level of 50, which represents no change in business activity.

Input prices – the prices of raw materials and semi-manufactured goods – showed the most extreme decline with an index level of 37.6, signalling steep and protracted input price deflation. It was the eighth consecutive monthly fall in input prices, according to NTC.

Manufacturing output, new orders and employment uniformly contracted during December.

The euro-zone PMI is based on data from Germany, France, Italy, Spain and Ireland, covering 82 per cent of total manufacturing activity in the euro-zone. In the UK, the PMI is considered one of the most accurate indicators. Stephan Monissen, London-based economist at Salomon Smith Barney, the securities firm, said the weak industrial output data for Germany suggested the economy was more sluggish than he had expected.

He said the ECB would probably cut interest rates in the spring "with a decent chance of a second cut in mid-1999".

The gloomy manufacturing data contrast starkly with continued optimism among euro-zone consumers.

A European Commission survey published yesterday said consumer confidence is running at the highest level this decade.

Barry Riley, Page 13

WORLD MARKETS

STOCK MARKET INDICES		
New York Lunchtime		
Dow Jones Ind Av	9509.98	(-109.93)
NASDAQ Composite	2334.10	(-50.49)
Europe and Far East		
CAC40	4100.70	(-101.20)
DAX	5200.10	(-70.50)
FTSE 100	6033.6	(-51.4)
FTSE Eurotop 300	1215.91	(-19.23)
Nikkei	13,360.97	(-7.51)
US Lunchtime RATES		
Federal Funds	4.9375%	
3-mth Treas Bills Yld	4.47%	
Long Bond	100[illegible]	
Yield	5.22%	
OTHER RATES		
UK: 3-mo Interbank	5[illegible]%	(same)
UK: 10 yr Gilt	138.54	(137.12)
BBA Eurolibor	3[illegible]%	(same)
Germany: 10 yr Bund	107.31	(107.07)
Japan: 10 yr JGB	100.29	(100.42)
NORTH SEA OIL (Argus)		
Brent Dated	\$11.79	(12.15)

GOLD		
New York: Comex	\$289.3	(293.6)
London:	\$288.45	(293.05)
DOLLAR		
New York: Lunchtime		
£	1.63045	
€	0.8860	
SFr	1.38825	
Y	111.975	
London:		
£	1.6305	(1.6401)
€	0.8884	(0.8670)
SFr	1.3909	(1.3976)
Y	111.80	(109.320)
Tokyo Close		Y 112.40
EURO (London)		
\$	1.1543	(1.1534)
£	0.7079	(0.7033)
Y	129.045	(126.090)
SFr	1.6065	(1.612)

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Euro-zone target price €2.15. Prices in local currency as shown

Bahrain	Din1.300	Iceland	IKr265	Oman	OR1.75
Belgium	BFr90(€2.23)	Italy	L3900(€2.01)	Poland	Zl 10.00
CIS	US\$4.00	Jordan	JD1.75	Portugal	Esc320(€1.60)
Croatia	Kn19.00	Kuwait	KWD0.750	Qatar	QR13.00
Denmark	DKr18.00	Latvia	Ls1.65	South Africa	R15
Estonia	EEK34.00	Lithuania	Lit21.00	Spain	Pta225(€1.35)
Finland	FmK13.00(€2.19)	Lebanon	LBP3,500	Sweden	SKr20.00
France	FFr14.00(€2.13)	Luxembourg	LFr90(€2.23)	Switzerland	SFr3.50
Gibraltar	£0.75	Morocco	Dh15.00	Syria	S£90.00
Greece	Dr500	Netherlands	Fl 4.80(€2.18)	Tunisia	Din2.000
Hungary	Ft300	Norway	NKr19.00	UAE	Dh13.00

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WORLD NEWS

EUROPE

EU PRESIDENCY GERMAN AGENDA SETS OUT FEDERALIST VISION WITH QUALIFIED MAJORITY VOTING

Fischer says goal is political union

By Quentin Peel in Strasbourg

Joschka Fischer, Germany's foreign minister and deputy chancellor, gave a ringing call yesterday to make political union the goal of the European Union as an essential counterpart to the introduction of the euro.

He called for majority voting to become the norm in all aspects of EU decision-making except for "questions of fundamental importance such as treaty amendments", and more powers for the European parliament to provide democratic control over other EU institutions.

Mr Fischer, leader of the minority Green party which shares power with Germany's Social Democrats, also said a European charter of basic rights would be launched as an initiative of the German government.

In a formal presentation to the European parliament of his government's agenda for its six-month presidency of the EU, he spelt out an unashamedly federalist vision of the future for a united Europe.

"The introduction of a common currency is not primarily an economic, but rather a sovereign, and thus eminently political act," he said. But he warned the pooling of 11 currencies in the euro, without creating political and democratic structures, would create a tension which would "undermine the current status quo in the not too distant future.

"We must therefore strengthen the EU's ability for political action, and gear its internal structures to the new tasks. Political union, including new member states, must be our lodestar from now on," he said.

Although he is known as the most passionate advocate of an integrated European Union in the new German government, Mr Fischer's statement also represents official policy. It could well cause difficulties for the British government in its cautious efforts to persuade a Euro-sceptic UK public to accept the single currency, as well as for other euro outsiders such as Denmark and Sweden.

Mr Fischer spelt out four immediate objectives and four long-term ambitions for Germany's EU policy. He underlined his determination to reach agreement on Agenda 2000, the package of budget reforms intended to stabilise spending and clear the way for eastern enlargement of the EU by the end of March. "The negotiations will be very difficult," he admitted. At the same time he insisted Germany wanted fairer burden-sharing in financing the budget.

His three other immediate priorities were a new pact on fighting unemployment, progress in the negotiations to enlarge the EU, and strengthening the foreign policy capacity of the Union. He proposed starting an Intergovernmental conference to resolve the constitutional reforms needed for further political integration in 2001.

In the long term, Mr Fischer called for more democracy, including a charter of basic rights, and a stronger emphasis on human rights in EU foreign policy.

Anger grows over Cresson and Marin

By Neil Buckley and Quentin Peel in Strasbourg

Edith Cresson, the former French prime minister, was coming under increasing pressure from the European parliament to resign last night as the European Commission battled to avoid being voted out of office.

Both Mrs Cresson, now the European Union's education commissioner, and Manuel Marin, a Commission vice-president, were urged to quit over alleged maladministration in their departments. They were named in resolutions by three parliament groups – including the second-biggest, the mainly Christian Democrat European People's party.

There was particular anger with Mrs Cresson, however, following her defiant performance before parliament on Monday, when she repeated denials of any personal wrongdoing and insisted there had been no fraud or mismanagement in programmes under her control. The moves against individual commissioners made it clear Jacques Santer, Commission president, had failed to defuse the crisis in his speech on Monday when he pledged "zero tolerance" of fraud.

The EU executive faces a parliamentary censure motion tomorrow that could – although this remains unlikely – force all 20 commissioners to resign. Urgent attempts to negotiate a compromise between the two EU institutions and between political groups in parliament were continuing last night.

The resolutions against Mrs Cresson and Mr Marin were denounced by the Socialist group, parliament's biggest, as "party political" attacks on socialist commissioners. The Socialists presented their own resolution saying that if individual commissioners were deemed culpable of mismanagement, Mr Santer – a Christian Democrat – should step down too. Both the 202-strong EPP and the European Liberal Democrats, parliament's third-largest group with 42 members, adopted the same wording on Mrs Cresson and Mr Marin.

They called on Mrs Cresson to accept responsibility for "bad administration" in Leonardo, a programme to support vocational training projects in the EU. Mr Marin was called on to take responsibility for "misuse of humanitarian aid funds for other purposes" in Echo, the EU's humanitarian aid office. The Greens referred only to the "possibility" of dismissing Mr Marin, but said the Commission should use its powers to ask the European Court of Justice to retire Mrs Cresson.

Mrs Cresson's refusal to acknowledge any fault on Monday had angered some MEPs. Mr Marin, in contrast, admitted he might have made mistakes, but added "during all the time I have been a commissioner, I have never consented to or covered up any case of fraud."

Commissioners under fire

Edith Cresson

Age: 64
Commissioner for education, research, science and development since 1995.

French cabinet minister throughout the 1980s, with experience in agriculture, foreign trade and European affairs. Served 321-day stint as France's first woman prime minister between 1991-92 but was dismissed in April 1992 by Francois Mitterand, French President and her political mentor. Mayor of Châtellerault, a small town south of Tours, from 1983 to 1997. Married to an industrialist in 1959, she had two daughters before devoting herself full-time to politics.

Manuel Marin

Age: 49
Vice president and commissioner for external relations with Mediterranean countries, the Middle East, Latin America and parts of Asia.

Moved to Brussels in 1986 as employment commissioner. Later moved to fisheries before switching to foreign relations and humanitarian aid in 1993. Longest serving commissioner and still one of the youngest. Trained as a lawyer, Mr Marin became a socialist member of the Spanish parliament in 1977. Having studied European law in France and European studies in Belgium, he was considered an ideal candidate to engineer Spain's entry into the European Union between 1982 and 1995.

INSEE ESTIMATE 1998 ENDED WITH LOWEST ANNUALISED RATE RECORDED SINCE 1954

French inflation running at 0.3%

By Robert Graham in Paris

France ended 1998 with inflation running at an annualised 0.3 per cent, the lowest rate recorded since 1954, according to Insee, the official statistic agency.

The figure, though provisional, was considerably below the official forecast of 1 per cent made in the first half of the year. It was also among the most stable in the European Union and among the industrialised nations of the Organisation for Economic Co-operation and Development (OECD).

According to Insee, consumer prices in December were virtually unchanged at 0-0.1 per cent after holding similarly steady in November. Energy prices fell 0.3 per cent during December.

This brought the year-on-year fall in energy prices to minus 5.2 per cent and was a main component in driving France's inflation performance down to record lows.

"One of the key factors in this new disinflation has been the fall in the price of petrol," Dominique Strauss-Kahn, finance minister, said yesterday.

Oil and gas prices came in well below forecasts made at the beginning of last year. At the same time, food prices, usually exercising a strong pull on inflation, had been contained throughout the year.

If these trends continued with only a modest rise in the price of petrol, economists predicted France's headline inflation this year would remain below 1 per cent and similar to that of Germany.

However, in the case of France, service sector prices were expected to rise faster, reflecting a stronger employment picture than in Germany. The cost of services rose 2 per cent year-on-year in 1998.

Mr Strauss-Kahn also emphasised that France had achieved this historically low inflation during a year of dynamic 3 per cent growth, the most robust in the EU.

Strong consumer-led growth accompanied by low inflation occurred against a background of the biggest increase in household purchasing power in a decade. Household spending power was up 3.4 per cent last year.

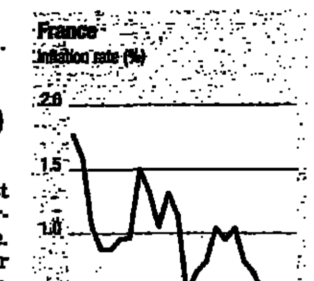
The biggest beneficiaries of this increased purchasing power were France's 4.5m civil servants, who were awarded what turned out to be an advantageous pay increase.

In advance of the March 1998 regional elections, civil servants were given a two-stage 1.3 per cent pay rise for 1998 on the basis that inflation would be just over 1 per cent.

Private sector pay awards were more moderate, reflecting employers' concerns about the introduction of a 35-hour week from the year 2,000. In the climate of falling inflation, the Socialist-led government of Lionel Jospin will be watching closely for signs of the economy slowing down.

Of late, the official target of 2.7 per cent growth for 1999 has begun to look increasingly unlikely as industry feels the impact of the emerging markets crisis.

France
Inflation rate (%)



Source: Datastream/ICV

Euro-cheat targets Spanish pensioners

By David White in Madrid

Less than two weeks after the launch of the euro, the first euro-swindles are being reported in Spain.

In a country where confidence tricks sometimes take elaborate forms, conmen have found in the new currency a straightforward way of hoodwinking pensioners out their cash savings.

Police in Barcelona have been investigating complaints about a well-dressed man trying with varying success to persuade elderly people that their pesetas are about to become worthless and need changing into euros. In one instance, the victim lost Pta80,000 (€480, $555). The newspaper El Periódico de Catalunya said similar swindles have been carried out in towns around Barcelona. In most cases, the visitor claims to represent the victim's bank.

Warning that the peseta will cease to be valid this month, and to spare the customer the inconvenience of taking cash to the bank, he offers to take it and either pay the money into the victim's savings account or exchange it within a few days for euro notes.

Makers of coin-operated machines are concerned about an increased risk of counterfeiting. Azkoyen, the leading Spanish maker of vending machines, plans to start selling units this year capable of accepting and giving change in euros.

BUDGET STRATEGY COMMISSION SAYS STRICTER DISCIPLINE NEEDED

Austria rejects belt-tightening demand

By Michael Smith in Brussels

The Austrian government yesterday rejected a call by the European Commission for stricter budgetary discipline, saying there was no scope for further belt-tightening.

It was reacting to a Commission warning that it was in danger of breaching the terms of a "stability pact" aimed at controlling spending by euro-zone governments in the interests of the single currency.

The Commission said Austria's budget strategy to 2002 was "risk prone" and an additional safety margin was needed to "insure against unforeseen developments in economic activity and in the public finances".

Rudolf Edlinger, Austria's finance minister, said there could be no further belt-tightening in the country following years of budgetary consolidation.

Yesterday's clash between Brussels and Vienna could be the first of a series between the Commission and EU countries.

The Commission will complete examination within two months of the stability programmes of single currency participants and the convergence plans of the other four EU states. It has approved those of Finland, the Netherlands, Greece and Denmark without serious adverse comment and said yesterday Ireland's plan fulfilled the requirements of the stability pact.

The assessments aim at preventing countries breaching the stability and growth pact agreed at the 1997 EU summit. It set a key upper limit of 3 per cent for the ratio between budget deficits and gross domestic product. Failure to meet that limit could lead to fines of up to 0.5 per cent of GDP, but such punishments would only be imposed in extremis.

Austria's programme envisages a reduction in the budget deficit ratio to 1.4 per cent of GDP from last year's 2.2 per cent, and a cut in gross public debt to 60 per cent of GDP from last year's 64.4 per cent.

The Commission's report – adopted at the initiative of Jacques Santer, president, and Yves-Thibault de Silguy, monetary affairs commissioner – said "under normal cyclical conditions" this budget deficit target provided the necessary margin to avoid breaching the stability pact's 3 per cent limit. But the report called for further action on the deficit to guard against unforeseen developments.

The Commission said Ireland had given realistic budget surplus projections, but in its case a tighter fiscal policy would help contain risks from rising wages and inflationary pressures.

Ireland sees GDP growth falling from 9.5 per cent in 1998 to 5.8 per cent in 2001, the budget surplus declining from 1.7 to 1.6 per cent of GDO and debt from 59 to 43 per cent of GDP.

NEWS DIGEST

MOSCOW-PARIS TIES STRENGTHENING

Yeltsin planning visit to France at end of January

Boris Yeltsin, the Russian president, plans an official visit to France at the end of January in a move that underlines strengthening relations at a time when the two countries have taken stances critical of US foreign policy.

Hubert Védrine, French foreign minister, and Igor Ivanonv, his Russian counterpart, said after talks in Moscow yesterday Mr Yeltsin would meet President Jacques Chirac during a visit on January 28 and 29. They would discuss the Middle East, former Yugoslavia and bilateral issues.

Mr Védrine said yesterday the two countries had "complementary" positions on issues including Iraq. France and Russia condemned the recent US and UK bombing of Iraq and have called for an easing of sanctions. He said France was in favour of new financial aid to Russia, providing the government met conditions laid down by the International Monetary Fund. **Andrew Jack, Moscow**

FINNISH FOREIGN RELATIONS

Call to review non-alignment

Finland will need to review its non-alignment policy if Nato assumes a broader role in future European security arrangements, Anneli Taina, defence minister, said yesterday. Ms Taina said the EU – of which Finland is a member – was likely to give Nato a big role in its accelerating quest to develop a common security and foreign policy. "I think that if Nato develops into a more and more broad co-operation organisation in Europe and its meaning becomes greater in Europe, we must be ready to change our attitude and position towards Nato," said Ms Taina, a Conservative.

Ms Taina said Finland would also need to reassess its stance on Nato if its non-aligned western neighbour Sweden or the Baltic states moved closer to membership. A broad consensus on non-alignment has begun to creak since Finland joined the EU in 1995. However, opinion polls show a majority of Finns still oppose Nato membership on the grounds that it would unnecessarily upset neighbouring Russia. **Reuters, Helsinki**

BALKAN REGION

Accord on peacekeeping force

Defence ministers from six Balkan countries and Italy yesterday signed an agreement to set up a regional peacekeeping force under Nato auspices. The 4,000-strong "Balkan brigade" would be available for UN peacekeeping duties and would help with disaster relief and humanitarian missions in south-east Europe, Greek officials said.

Akis Tsochatzopoulos, Greek defence minister, said the force would contribute to "stability and security in the wider Balkan region". But it is not expected to play a role in the Kosovo crisis, he said.

The peacekeeping force grew out of US efforts for military co-operation in the southern Balkans under Nato's "partnership for peace" programme for aspiring alliance members. Greece and Turkey, both Nato members, set aside differences over the Aegean to take part in exercises with Albania, Bulgaria, Macedonia and Romania. The force will have a rotating command and headquarters. A Turkish officer will be the first commander, with Greeks heading the political and military administration.
Kerin Hope, Athens

KOSOVO LIBERATION ARMY'S CAPTIVES

Call to free Serbs rejected

A spokesman for the ethnic Albanian Kosovo Liberation Army (KLA) yesterday rejected demands from international mediators for the unconditional release of eight Yugoslav soldiers captured by the KLA.

Albin Kurti, spokesman for KLA political representative Adem Demaci, reiterated the guerrillas' demand that the soldiers be swapped for nine KLA fighters taken prisoner when trying to cross into Kosovo from neighbouring Albania last month.

"It could be that the international community is putting pressure on the KLA for an unconditional release...but the KLA will stand firm in its insistence that the prisoners of war be exchanged," Mr Kurti told a news conference in Pristina, the regional capital. **Reuters, Pristina**

ROMANIAN COAL STRIKE

Ultimatum to president

Miners' union leaders from Romania's largest coalfield yesterday gave the country's president a 24-hour ultimatum to come to the western Jiu Valley to defuse an eight-day-old strike over pay or face protests in Bucharest.

"Bucharest, Bucharest," shouted some 10,000 miners gathered outside the local state mining company in Petrosani, 350km north-west of the Romanian capital. Miners' leader Miron Cozma told the protesters that President Emil Constantinescu and Prime Minister Radu Vasile had been given 24 hours to come to the Jiu Valley to discuss pay rises and plans to scrap loss-making mines. "Otherwise, we will resort to major steps," Mr Cozma said to cheers from the miners – in a reference to previous threats to move the protests to Bucharest.

The miners are demanding monthly pay rises equivalent to some $340, from around $230 at present. The average monthly wage in Romania is $120. **Reuters, Bucharest**

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Spanish power plan: EU to decide whether it is levy or liberalisation

Brussels ruling could have consequences for deregulation of power sector throughout Europe, writes **Tom Burns**

An innovative financing package drafted by the Spanish government to speed up liberalisation of the power sector comes under the scrutiny of the European Union's regulatory authorities this week.

The plan, which could have far-reaching consequences for deregulatory procedures in the European power industry, is aimed at smoothing the transition of former state utilities and other older electricity companies to a competitive environment.

It involves the payment to these existing companies of Pta1,030bn ($7.1bn) through a securitised debt issue. Under the plan, they would receive immediately an amount that would be paid back to investors from 4.5 per cent of all electricity billings over the next 15 years, including those of any new entrants to the market.

Critics say it amounts to a levy. Supporters say it could be widely applied to speed up liberalisation elsewhere in Europe.

The debt issue, which would be the largest ever generated by Spanish companies, seeks to compensate the power groups for investments made under the previous highly regulated system and which new entrants would not have to make, known in the industry as "stranded costs".

The EU's competition authorities, to whom the plan has had to be referred by Spain's industry ministry, will however take note of the controversy that the plan has created in Spain. It was virulently attacked by the opposition Socialist party when it was debated by parliament just before Christmas, and it has also drawn the fire of the government's own advisory commission for the electricity sector.

"A consensus is preferable for this sort of undertaking and the government has not got it," said Emilio Zurutuza, former chief executive of a regional power group that was absorbed by Endesa, the main domestic generator.

The Socialists say the debt issue would be an overgenerous "present" to the generators the cost of which will be passed on to consumers. The sector's watchdog commission says that instead of fostering competition, the compensation package would allow the dominant companies to consolidate their hold on the domestic market. Spain's electricity industry is virtually a duopoly: the two big power groups, Endesa and Iberdrola, account for some 80 per cent of total electricity output.

Defending the scheme, officials say it will introduce meaningful competition, reducing electricity costs by 10.7 per cent between 1997 and 2001 and by 18.8 per cent in real terms.

The key issue for the EU is whether the securitisation package constitutes a state subsidy, as critics imply, or, as both the centre-right government and the power groups claim, a fair trade-off that makes deregulation viable for suppliers and consumers alike.

The government devised the securitisation instrument to gain the agreement of the power groups to a revised deregulation timetable that will allow some 8,000 companies, representing 44 per cent of total energy consumption, to choose their power supplier by the end of this year instead of in 2004, the date agreed under a 1996 electricity protocol.

"Close scrutiny by Brussels is inevitable because deregulation in Spain will set standards for liberalisation in France and Germany," said an investment banker involved.

Enron gains access to German power network

By Andrew Taylor, Utilities Correspondent

Enron, the US energy group, has won its battle to gain access to part of the German power distribution network following intervention by the German Federal Cartel Office.

The group had complained it was being blocked from selling electricity in North Rhine Westphalia by Elektromark, which supplies power to the region and owns the local distribution network.

Enron said it was unable to satisfy its contract to supply power to the municipal power company of Ludenscheid, a town in the Sauerland region just south of the Ruhr industrial area.

Following the intervention of the cartel office, which sent a warning letter to Electromark, the US group announced this week that it had signed a transmission agreement with the local grid operator.

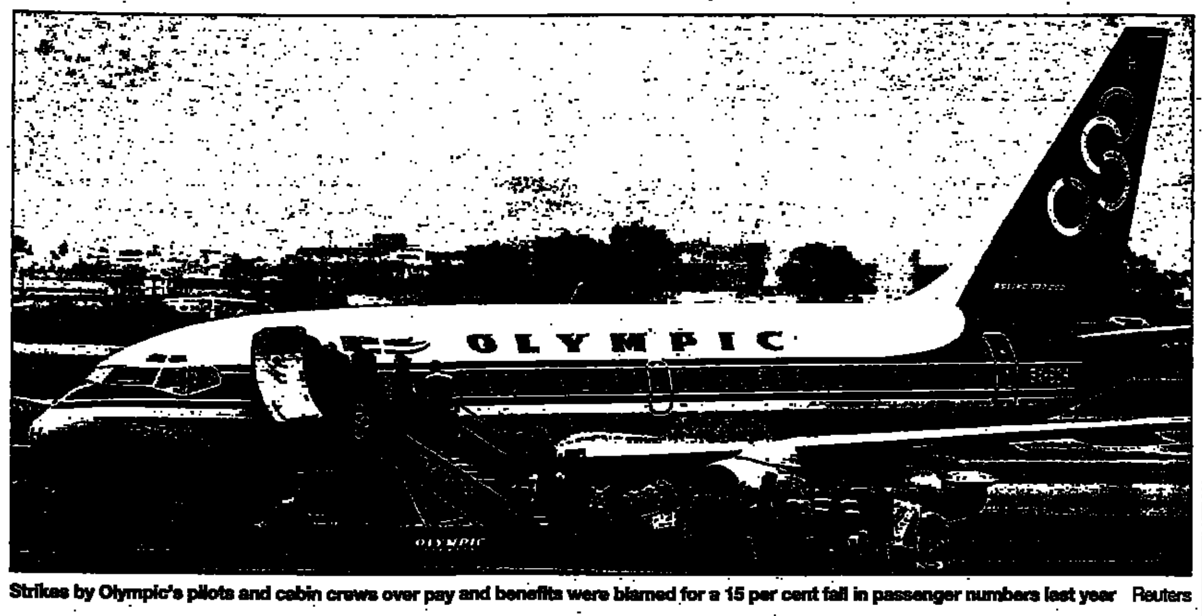
From next month European Union countries are required to open to competition at least 25 per cent of national electricity supply markets.

Minerals, Oils Res. Shrs. Fd. Inc.

مكرر من الاصل

Sale of Olympic stake postponed

By Kerin Hope in Athens



Strikes by Olympic's pilots and cabin crews over pay and benefits were blamed for a 15 per cent fall in passenger numbers last year Reuters

Greece's Socialist government is to postpone the planned sale of a strategic stake in Olympic Airways because of the state carrier's worsening financial and labour problems, officials said yesterday.

Instead the transport ministry will seek an international airline consultant to take over management and revive a faltering restructuring effort launched last year. One Olympic official said Speedwing, the consulting arm of British Airways, would be "an obvious candidate".

The government last year asked Salomon Smith Barney, the international investment bank, and Eteva, a state-controlled Greek investment bank, to find a strategic partner for Olympic Airways. It is the only southern European state carrier that does not belong to an international airline alliance.

But strong union opposition to a cost-cutting plan, imposed under a special law for restructuring loss-making state enterprises, has discouraged potential investors.

Intermittent strikes by pilots and cabin crews protesting against a pay freeze and cuts in benefits were blamed for a 15 per cent fall in passenger numbers last year.

The refusal of Olympic pilots to work overtime during the New Year holiday resulted in dozens of flights being cancelled or delayed.

The airline's management said up to 15 per cent of domestic and international flights would have to be cut if negotiations this week with the pilots' union fail to resolve the dispute.

"Revenue projections in Olympic's business plan look increasingly unrealistic," one analyst said.

"Given the uncertain outlook for the industry after the Asian crisis, it would be difficult to bring off a strategic sale in the next few months."

Despite an EU-approved state aid package, Olympic faces deepening financial crisis. The airline forecast a return to profit in 1998 after the government injected Dr14.2bn ($51m) in fresh capital last July and provided a $378m state guarantee for loans to buy new aircraft. Under EU competition rules, Olympic cannot receive further subsidies.

But an audit of Olympic's 1997 financial results by PWC, the international accountants, revealed bigger than reported losses. An airline official said the losses amounted to Dr40bn, compared with Dr6.8bn on the published balance sheet.

Analysts said the difference reflected inadequate financial reporting systems at Greek state enterprises. Olympic's wage bill was much bigger than projected, amounting to 50 per cent of total revenues, while it had tripled commissions to travel agents in a bid to win business on international routes.

SWEDEN UNIONS ALARMED AS LEADING COMPANIES RELOCATE

Call for probe into corporate exodus

By Tim Burt in Stockholm

Sweden's largest union movement yesterday called for a government commission to investigate a sharp increase in the number of leading companies that are moving their headquarters or management functions overseas.

LO, the union movement representing 2.1m blue collar workers and a close ally of the ruling Social Democrats, said job security was being undermined by companies reconsidering their presence in Sweden.

Concern at companies threatening to relocate has risen dramatically in recent weeks following reports of a possible strategic alliance or merger between Volvo – the Swedish automotive group – and either Ford of the US or Fiat of Italy.

Bertil Jonsson, LO president, yesterday told reporters he would oppose a sale of Volvo and any shift in its headquarters overseas, warning institutional investors might block such a move. The union leader is also a board member at Fourth AP Fund, one of Sweden's largest investment companies, which owns 9 per cent of Volvo.

"I cannot see the fund saying yes to a sale and a move from Sweden," he said.

Fears of an exodus by Swedish companies have grown following last year's decision by Ericsson, the telecommunications group and Sweden's largest exporter, to move some of its corporate functions and European headquarters to London.

Last month Astra, the Swedish pharmaceuticals group, said its headquarters would also move to London following its merger with Zeneca of the UK.

In recent years, a number of large Swedish corporations – including Pharmacia, Nordbanken, Nobel Industries, ABB, Ikea and Tetra Laval – have moved headquarters overseas, either following international mergers or for tax reasons.

Employers have partly blamed Sweden's punitive income taxes, relatively illiquid stock market and inflexible labour regulations for the decision to move.

SAF, the Swedish employers confederation, yesterday said the LO had contributed to the problem by refusing to embrace labour market reforms or changes in taxation.

"There is a strong feeling in industry that neither the government nor the union movement wants to make fundamental reforms," said Christian Bratt, director of international affairs at SAF.

Government officials made clear it was considering tax reforms for low and middle income earners.

The finance ministry is considering lowering tax levels for expatriates on short term contracts.

Ericsson last year said difficulties in recruiting overseas staff was one reason behind its decision to relocate some corporate functions to London.

LO officials warned further moves overseas could damage Sweden's industrial base, arguing that directors located outside the country would take a different attitude to investment in Sweden.

Communist party in Russia faces split

By John Thornhill in Moscow

Russia's Communist party threatened to crack in two yesterday when a group of prominent leftwing MPs said they intended to contest the forthcoming parliamentary elections on a separate platform.

Victor Ilyukhin, the radical leader of the parliamentary security committee, announced he would form his own electoral bloc based on the Movement for the Support of the Army (DPA) before the December elections. Mr Ilyukhin said he would be joined by Albert Makashov, a former general, and several other Communist MPs.

The split in Russia's biggest parliamentary party emphasises how fragmented the country's political spectrum is. Forty-three political parties contested the previous parliamentary elections in December 1995 – although only four won enough votes to enter the parliament as parties.

Our Home is Russia, the centrist party which forms Russia's second biggest parliamentary grouping, has also been riven by factionalism recently. The internal disputes culminated in the forcing out of Alexander Shokhin as the party's parliamentary leader in December.

Mr Ilyukhin, a hardline Leninist and visceral opponent of President Boris Yeltsin, has long criticised the conciliatory policies pursued by the Communist party leadership. The DPA, backed by disaffected army officers, has championed a far more confrontational approach.

In recent weeks, Mr Ilyukhin and Mr Makashov have come under withering fire from Jewish groups and liberal politicians for making anti-Semitic remarks.

The criticism grew so intense that Gennady Zyuganov, the Communist party leader, was forced to distance himself from their position.

But Mr Zyuganov yesterday played down the significance of the split. He suggested the Communist party might now co-operate with the Fatherland party recently founded by Yury Luzhkov, mayor of Moscow, to support his presidential ambitions. "We will work with them in as far as there remains the danger of a liberal revanche," Mr Zyuganov said.

The Communist party, the country's most organised political force with 500,000 members and nationwide representation, includes supporters ranging from social democrats to nationalist Stalinists.

There are some signs that the social democratic wing, unofficially led by Gennady Seleznyev, a former editor of the Pravda newspaper and speaker of the lower house of parliament, may also break with Mr Zyuganov's party. In a television interview on Monday, Mr Seleznyev said he was "ready" to head a new left-of-centre coalition if called upon to do so.

Ecevit outlines secularist blueprint

Bulent Ecevit, Turkey's new prime minister, yesterday outlined a staunchly secularist programme in a speech to parliament by vowing to follow the principles of Mustafa Kemal Ataturk, founder of the modern Turkish state, Reuters reports from Ankara.

"To all the problems we may face, we shall seek solutions in the enlightened path of timeless leader Ataturk," said Mr Ecevit, whose new minority government will lead the country to polls in April.

Ataturk forged overwhelmingly Moslem Turkey as a secular country in 1923 and has remained a dominant political figure.

Mr Ecevit, 73, became premier on Monday at the head of a minority government after six weeks of political crisis. Tension between the secularist army and main opposition Islamists has risen in recent days.

The leftist leader managed to garner outside support from two rival conservative parties.

The powerful military has called several times in the last 10 days for an end to political instability.

Mr Ecevit, three times prime minister in the 1970s, acknowledged the new administration did not have enough time to make a mark because of elections set for April 18.

"The main duty of the 56th government, which has a limited tenure to govern, is to carry Turkey to the general and local elections...in a secure and peaceful fashion," said Mr Ecevit, who heads the leftwing Democratic Left party (DSP).

However, he will have to deal with economic woes at home and differences with Nato ally Italy over the fate of a Kurdish guerrilla leader in Rome.

Mr Ecevit repeated previous promises to pass urgently a 1999 budget and banking bill, reform the costly social security system and grant union rights to public sector employees.

He also pledged to keep up the fight against inflation. Annual wholesale price inflation dived to 54 per cent in December from 91 per cent a year earlier. The speech was designed to reinforce parliamentary support ahead of a confidence vote scheduled for Sunday. Mr Ecevit is likely to win the vote.

The main opposition Islamist Virtue party and secularist parties are expected to compete fiercely in the forthcoming polls.

Virtue, the biggest grouping in the parliament, is tipped to do well despite suffering from a two-year legal onslaught inspired by the army. It has already launched an election campaign.

Friction between Islamists and the military, which has staged three coups since 1960s, increased at the weekend when the military said Virtue could be outlawed for allegedly threatening democracy and Turkey's secular constitution.

WORLD TRADE

BANANA DISPUTE WASHINGTON AND BRUSSELS REMAIN AT LOGGERHEADS AS WORLD TRADE BODY PLANS RULING ON EU STANCE

WTO orders review but fails to cool tempers

By Frances Williams in Geneva

After months of procedural wrangling between the US and the European Union, the World Trade Organisation yesterday decided that a panel should rule on whether the EU's amended banana import regime complies with previous WTO judgments. However, the decision failed to cool tempers in the long-running transatlantic dispute.

Washington said it would not back away from its intention to seek WTO authorisation for $570m-worth of trade sanctions when the WTO's dispute settlement body next meets on January 25. The EU has already brought a WTO case challenging the planned sanctions which it argues would be illegal under WTO rules.

The dispute settlement body yesterday agreed to a request from Ecuador and, despite objections from the US and three Latin American banana producers, from the EU itself that the original panel should review the consistency of the EU's new banana import system that came into effect on January 1.

The three-man panel will have 90 days to produce its report, following which there could be an appeal. This could in turn delay a final WTO decision until long after early March which the US says is the latest date at which its sanctions will be brought into effect.

US officials said after yesterday's meeting that they were considering whether to ask for third-party rights on Ecuador's request, giving access to panel hearings and submissions.

The US, Honduras, Guatemala and Panama had earlier argued without success that the EU panel request was not valid. They particularly disliked what appeared to be a call by the EU for the panel to rule that the regime must be considered to conform to WTO rules unless formally challenged.

However, Roderick Abbott, EU ambassador to the WTO, said yesterday that since Ecuador had issued such a challenge this call was moot. The EU had decided to maintain its panel request to make sure a panel was established in the event that Ecuador came under pressure to withdraw.

Ecuador, the biggest banana supplier to the EU, has chosen to go its own way on a panel request despite US reservations. Late last year the US pressed the EU to agree an expedited panel that could report before the clock started ticking on the sanctions timetable, but the EU refused.

WTO procedures permit the US and the five Latin American co-complainants, including Mexico, to request authorisation to retaliate if the EU had not complied with its WTO obligations by January 1. However, the EU maintains that the regime is WTO-compliant, and that sanctions cannot be invoked unless the WTO itself, through a panel, decides otherwise.

The US and its allies argue that the amended scheme, which continues to favour bananas from African, Caribbean and Pacific countries, still unfairly discriminates against Latin American bananas and US-based banana distributors.

Rita Hayes, US ambassador to the WTO, yesterday called on the EU to work out a settlement on a WTO-consistent regime. However, Mr Abbott said the EU would not negotiate under the sanctions threat and did not accept that its regime needed further amendment unless there was a WTO ruling to that effect.

● WTO members agreed yesterday not to replace Celso Lafer of Brazil, who has been appointed his country's trade minister, as one of two trade diplomats conducting consultations on the next WTO director-general. The task will now be left solely to William Rossier, Switzerland's WTO ambassador.

Doubts cast on Baku-Ceylan pipeline costing

By Robert Corzine in London and Leyla Boulton in Ankara

Western oil companies operating in Azerbaijan are still awaiting details of Turkey's terms and tariffs for the controversial Baku to Ceyhan pipeline, even though Ankara has publicly said it has disclosed such details.

The pipeline is being heavily promoted by Turkey and the US for economic and strategic reasons, but many oil companies in the Caspian Sea region doubt whether a sufficient volume of oil will be available to justify spending the $3.7bn that the Azerbaijan International Operating Company (AIOC) believes it will cost to build the 2,000km line.

Washington has called on Turkey, Georgia and Azerbaijan to join forces with the AIOC to bring down the cost of the project and to ensure that it is commercially viable. The US views the Baku-Ceyhan pipeline as a key element in underpinning the political independence of the region.

This week senior officials from Socar, the Azeri state oil company, the AIOC and Turkey met in Ankara for further talks on the agreements needed between the governments of the proposed transit countries.

But western oilmen say Turkey's public insistence that substantial progress is being made on enhancing the competitiveness of the Baku-Ceyhan option is not reflected in reality. They say Ankara has yet to give any indication of how much it will charge in transit fees or any financial incentives it might offer to make it more attractive. Western oil companies, most of which support a cheaper line to Supsa in Georgia, say substantial concessions need to be made to make the line viable.

This week Turkish officials said they expected Azerbaijan to complete the formation of the Main Export Pipeline Company by the summer, when they said that the various host government and inter-governmental agreements could be ready for ratification.

Azerbaijan is expected to invite AIOC members and other oil companies in the Caspian to take stakes in the company.

● Reuters reports that Iranian project management company Mapna has won a $347m deal to build a Caspian Sea oil pipeline to the country's northern refineries and was considering consortium partners.

Mapna said it had been informed by the National Iranian Oil Company (NIOC) that it won the contract, beating Italian, British, German, Russian, South Korean and Saudi competitors.

MEAT TRADE DEAL SOUTH AMERICA DROUGHT AND CUT IN CATTLE NUMBERS CREATE CONDITIONS FOR ACCESS

Australia to export beef to Argentina

By Gwen Robinson in Canberra

Argentina has agreed to accept its first fresh beef imports from Australia, a move the Australian government described yesterday as a significant market breakthrough.

Argentina has traditionally been a large beef producer and exporter. But drought in South America and reduced cattle numbers had combined with the Australian dollar's fall last year and a downturn in Australia's main Asian markets to produce favourable conditions for entry into Argentina's beef market, said Mark Vaile, Australian agriculture minister.

Under a new trade agreement, Australian beef exporters had gained access "to a country that has itself been considered a major competitor for Australian meat," he said.

Australia exports about A$3bn (US$1.9bn) worth of beef annually, with the bulk destined for Japan, the US and other Asian markets. But Asian demand for fresh beef has fallen in the past year.

The agreement with Argentina comes ahead of moves by the Australian government to expand its trade office in Buenos Aires and open new trade offices in South America and eastern Europe.

The offices are aimed at helping Australian exporters to diversify their markets and offset falling demand in traditional Asian markets.

In the latest sign that Asia's economic downturn is weighing on Australian commodities exports, figures published yesterday showed exports of Australian forest products down 14 per cent in the September quarter, with the biggest fall being in woodchip exports to Japan.

Mustering cattle in Queensland: Canberra's deal is part of its moves to diversify markets Ross Brey

Exports for the quarter amounted to A$270m, down 14 per cent, while imports rose 10 per cent to about A$765m, according to the Australian government's bureau of agricultural and resource economics.

Woodchip exports, which accounted for nearly half the total, plunged 22 per cent from the June quarter to A$132m, mostly on declining demand from Japan.

Brian Fisher, the bureau's executive director, said the decline had been expected and there were signs of recovery in other Asian markets, particularly for roundwood and wastepaper products.

The growth in imports, meanwhile, was due to strong domestic demand – mainly for timber used in housing – and lower world prices for sawn wood and wood-based panels, Mr Fisher said.

The decline in Asian demand for Australian forest products reflected similar downturns in regional markets for other agricultural products including seafood, wool, beef and grain.

Canal safety warning

By Charles Batchelor, Transport Correspondent

A proposal to reduce the number of pilots required on large vessels passing through the Panama Canal from two to one will endanger the safety of shipping, the canal's pilots' association warned yesterday.

At the same time a proposal from the Panama Canal Commission to make shipowners responsible for the first $1m cost of damage from incidents in the canal would increase their insurance costs, it said.

These measures have been put forward as part of a package of proposals in the run-up to the hand-over of the 51-mile canal by the US to Panama on December 31.

The Panama Canal Pilot's Association, representing most of the 270 pilots, complained there had been inadequate consultation on the proposed changes, which are to be considered by an independent arbitrator next month.

Rene van Hoorde, the canal's maritime operations director, said none of its proposals would affect safety.

OECD Export Credit Rates

The Organisation for Economic Co-operation and Development announced new minimum interest rates (%) for officially supported export credits for January 15 1999 to February 14 1999 (December 15 1998 to January 14 1999 in brackets).

Australian dollar	5.77 (5.76)	Yen	2.00* (2.00)
Danish Krone	5.06 (5.18)	Swedish Krone	4.86 (5.16)
Canadian Dollar		Sterling	5.61 (6.02)
up to 5 years	5.78 (5.96)	Swiss franc	3.69 (3.75)
5 to 8.5 years	5.72 (5.97)	US dollar for credits	
more than 8.5 years	5.78 (6.05)	up to 5 years	5.49 (5.57)
Korean Won	9.06(10.43)	5 to 8.5 years	5.45 (5.54)
		more than 8.5 years	5.65 (5.76)

These rates are published monthly by the Financial Times, normally in the middle of the month. A premium of 0.2 per cent is to be added to the credit rates when fixing at bid. Interest rates may not be fixed for more than 120 days.

** The Japanese Yen CIRR will change to 2.70 as of 18th January 1999.*

Rates for the euro, replacing the currencies of the 11 members of the euro-zone, are to be released tomorrow.

INTERNATIONAL

N-test ban treaty ratification a top priority for Clinton

By Stephen Fidler in Washington

President Bill Clinton's national security adviser said yesterday that US ratification of the treaty banning nuclear testing would be one of the Clinton administration's top priorities this year.

In a speech in which he also announced US penalties against three Russian scientific institutes for providing sensitive missile and nuclear technology to Iran, Sandy Berger said Mr Clinton would draw attention to the objective in his State of the Union address planned for next week.

Obtaining the long-awaited consent of the US Senate to ratify the comprehensive test ban treaty, signed by 151 nations, would not be easy. "We know this is an uphill fight. We have some formidable opponents in the Senate. But I think the important thing here is to make it clear to the United States Senate that the American people want this treaty ratified," he said.

"If the Senate rejected or failed to act on the test ban treaty, we would throw open the door to regional nuclear arms races and a much more dangerous world. Ratification will take a serious effort from all of us. It will be a terrible tragedy if our Senate failed to ratify the CTBT this year," Mr Berger told a conference on non-proliferation organised by the Carnegie Endowment.

Failure to ratify would also undermine US efforts to encourage India and Pakistan – both of which tested nuclear devices for the first time last year – to adhere to the treaty, which they have said they will do by September this year.

Mr Berger said ratification of the treaty would be one element of a US plan to move "aggressively" to strengthen the international non-proliferation regime. The US would also aim to deal with the risks posed by weapons of mass destruction by addressing regional threats, such as those posed by the governments of Iraq and North Korea, and bolstering defences to those potentially threatened by missile attacks.

He identified two main risks: that terrorists would acquire and seek to use chemical and biological weapons, and the acquisition of ballistic missile technology by a growing number of countries.

The US wanted to make rapid progress on a treaty to ban further production of fissile material. The five established nuclear powers – the US, Britain, France, Russia and China – had all agreed to a voluntary moratorium on plutonium production, he said.

The US would also work on strengthening the safeguards applied by the International Atomic Energy Agency and push to obtain agreements on compliance and inspection measures under the Biological Weapons Convention.

He named the three Russian entities to attract penalties, which included a ban on imports from and exports to the institutions, as: the Scientific Research and Design Institute of Power Technology, known as Nikiet; the D. Mendeleyev University of Chemical Technology; and the Moscow Aviation Institute. Last July the US took action against seven others and has warned that co-operation over lucrative space launches would not be expanded until Russia halted co-operation with Iran's ballistic missile programme.

Angola's government has upper hand in civil war of oil versus diamonds

Unita appears determined to fight to the bitter end even though the government controls the resources of the growing oil industry. Nicholas Shaxson reports

Angolans have found many reasons for killing each other this century. But two factors above all are propelling the conflict into a new phase, as troops from the Angolan Armed Forces battle against Unita rebels in the central highlands and render the moribund 1994 Lusaka peace agreement increasingly meaningless.

First, Unita's leader, Jonas Savimbi, believes it is his destiny to be president of Angola and he will fight until he wins that, or is eliminated.

The second reason is more complex.

A deep schism in Angolan society pits a rural-based Unita, claiming to represent real working Africans, against a corrupt, oil-rich government, symbolised by Portuguese-orientated and mixed race urbanites.

The ebb and flow of battle over the years suggest there will be no outright military victory in this conflict.

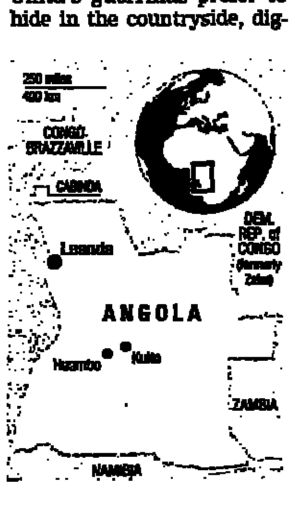
When Unita's Mr Savimbi used his astonishing charm and persuasion to convince policy-makers in the US and South Africa that he was a freedom fighter and true capitalist believer during the cold war years, he led what still is essentially a peasant movement with a strong Maoist flavour.

Unita's recent military successes near Kuito and Huambo illustrate that though many ordinary Angolans hate him, Mr Savimbi's appeal to poor, rural society has an enduring resonance.

The government is showing its concern.

President José Eduardo dos Santos said last month that Mr Savimbi was "heightening the class struggle to deepen these contradictions, so as to seize power violently".

The government's forces traditionally hold towns and cities, funding their war with oil revenues which have also fostered huge corruption and inequality. Unita's guerrillas prefer to hide in the countryside, digging diamonds scattered over huge areas of the bush.



Another dimension, important in the past, has faded. After the anti-colonial struggle ended at independence from Portugal in 1975, Mr Savimbi appealed increasingly to ethnic Ovinbundu identity.

But many former Ovinbundu supporters turned against him after he refused to accept defeat in presidential elections following a 1991 peace agreement, and tried instead to shell and starve Kuito into submission in the return to war.

The ruling Popular Movement for the Liberation of Angola (MPLA) is divided too, but it is held together by a shared opposition to Savimbi. "Many politicians in Luanda want Savimbi alive, to keep themselves in power," a foreign analyst said.

The full reality may be less cynical. Until mid-1998 Mr dos Santos wanted to weaken Mr Savimbi through international and domestic pressure and force him to move to Luanda as a weak junior partner in a power-sharing agreement. This could have addressed the class divide that Mr dos Santos knows will not be closed by military means.

But when Unita began offensive operations again in middle of last year, the government's suspicions that the rebel leader would never complete the Lusaka deal were confirmed, and policy changed tack. It mounted a clumsy effort to foster an anti-Savimbi faction of Unita officials in Luanda, to replace him with someone more willing to find a way to heal Angola's divisions. But Mr Savimbi remained firmly in control of his troops.

In the meantime, Mr dos Santos expects to have the upper hand in a long war of attrition, given that oil production will rise sharply next century, and the diamond deposits used by Unita for funding are slowly being degraded.

Mr Savimbi has for years used the UN-monitored Lusaka agreement, which he never saw as more than a negotiated surrender, as a shield behind which to hide, re-arm, and wait for future opportunities.

Two have appeared: the conflict in neighbouring Democratic Republic of Congo, and a catastrophic fall in the oil price which has torn huge holes in government finances.

Mr Savimbi has hoped for years that these divisions, fed by Angola's abominable poverty, will lead to an anti-MPLA uprising, perhaps backed by poorly paid conscripts and junior officers.

This hope, like the government's belief in the possibility of an anti-Savimbi coup within Unita, is more delusion than anything else. The fundamental divide that defines the war, and propels it forwards, is as deep as ever.

Netanyahu under fire for 'election economics'

By Avi Machlis in Jerusalem

Israeli opposition leaders yesterday attacked Benjamin Netanyahu, prime minister, for launching a spending spree ahead of elections scheduled for May 17, while economic policymakers warned of the dangers of election economics.

On Monday night, Mr Netanyahu reversed his economic austerity programme and pushed through a bill for free education for pre-school children that will cost the state Shk1bn ($243m). Mr Netanyahu had opposed the bill, which was initiated by the opposition Labour party, since his election in 1996.

Ehud Barak, Labour leader, who has opposed Mr Netanyahu's tight fiscal policy, said the move would "not cover up the government's failure to systematically address the problems of Israel's disadvantaged sectors over the past two years".

The government also moved to reduce costs of medical services and sell off public housing units at substantial discounts. Planned cuts to pensioner benefits have been scrapped. Treasury officials said the entire package could cost the state up to Shk2.5bn a year.

Political analysts said the decisions targeted voters from broad cross-sections of society. In contrast, since coming to power Mr Netanyahu has tried to maintain his shaky coalition by funding specific groups such as ultra-Orthodox Jews and West Bank settlers

The spending plans marked a shift away from Mr Netanyahu's policies which contributed to a decline in growth of gross domestic product from 4.5 per cent in 1996 to less than 2 per cent last year. His policies have angered the local business community but earned praise from international analysts and economic organisations.

Mr Netanyahu, also finance minister since the recent resignation of Yaakov Neeman, denied changing his policy to get votes and said the time had come to end two years of "belt-tightening". "We are investing in our human infrastructure. I am not handing out video recorders," he said.

But Jacob Frenkel, Bank of Israel governor, said expenditure changes must focus on promoting growth. "Any backtracking on the government's commitment to economic stability by lifting the inflation or deficit targets will accelerate inflation," he warned. Last week, Mr Netanyahu pledged to raise Israel's 1999 inflation target from 4 per cent to about 6 per cent.

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NEWS DIGEST

CONFLICT IN IRAQ

US threatens to crush no-fly zone defiance

US warplanes yesterday fired at a radar site in northern Iraq in the second such incident this week, as Washington warned Baghdad that it would crush any defiance in the no-fly zones. William Cohen, US defence secretary, on a trip to Japan, said the US would give no ground in enforcing the no-fly zones and said Baghdad would pay a price if it challenged US and British air might. Mr Cohen declined to say whether repeated Iraqi missile threats against US and British jets, or violations by Iraqi warplanes of the no-fly zones, might prompt wider attacks against the Iraqi military by American forces.

Beyond that I wouldn't want to say anything," he said.

The White House was also firm in its response to Iraqi defiance. "The no-fly zones are being enforced vigorously and American pilots will take the appropriate actions to respond to any action taken against them," White House spokesman Joe Lockhart said yesterday.

The Pentagon said a US F-16 jet was on a routine patrol of the northern no-fly zone yesterday when it opened fire with a High-Speed Anti-Radiation Missile (Harm) on an early-warning radar site near the city of Mosul.

US Central Command in Tampa, Florida, said there had been five violations in the southern no-fly zone yesterday. **Reuters, Baghdad**

SIERRA LEONE

Rebel leader in talks

Sierra Leone's detained rebel leader was flown from his jail to neighbouring Guinea for talks with mediators yesterday, raising hopes for a ceasefire after a week of fierce fighting in Freetown. Sierra Leone's ambassador to Guinea said Foday Sankoh – a prisoner in Nigeria and Sierra Leone for the past two years – went straight into talks with West African foreign ministers, the United Nations and the Sierra Leone government. Mr Sankoh's transfer abroad was a key demand of his Revolutionary United Front (RUF) fighters before they would consider a ceasefire or political talks. Mr Sankoh has been detained by the government of President Ahmad Tejan Kabbah and its military allies in the Nigerian-led force called Ecomog. He was sentenced to death for treason last October. **Reuters, Freetown**

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هكذا من الاصل

Doubts cast on Baku-Ceylan pipeline costing

for Clinton

US threatens to crush no-fly zone defiance

RUBIN 'OUR DOLLAR POLICY REMAINS ABSOLUTELY UNCHANGED'

'Hands off' is still the US watchword

By Gerard Baker in Washington

On the surface there was a numbing familiarity about the words of Robert Rubin, the US Treasury secretary, yesterday in response to questions about the Bank of Japan's currency market intervention to prop up the dollar.

"I'll just repeat what I've said so often, which is that a strong dollar has served us well and our dollar policy remains absolutely unchanged."

"We favour a strong dollar" has been the *leitmotif* of Mr Rubin's three and a half year tenure at the Treasury and, through the dollar's ups and downs, has become the official if somewhat tedious mantra of US foreign exchange policy.

But the timing of the restatement of that policy yesterday made it rather more significant than it might have seemed.

The Bank of Japan intervention and Mr Rubin's remarks came against a background of darkening storm clouds in US-Japanese relations over their perennially controversial trade balance.

The Clinton administration has come under mounting pressure from industry in the last few months to get tough with Japan.

For all the strength of the US economy overall, the manufacturing sector has slipped quietly into recession in the last six months, hit hard by weakness in international markets, and Japan is widely seen as the principal culprit.

While the main gripe so far has been the alleged "dumping" of cheap Japanese steel in the US market, anti-Japanese trade sentiment is rising across a range of industries. Many companies, backed by some members of Congress, are pushing hard for retaliatory action through a variety of legal weapons.

But the one piece of good news these companies have had in the last six months has come in the foreign currency markets.

Since last August, the dollar has declined from its peak by more than 25 per cent against the yen – hurting Japanese exporters, but providing crucial succour for hard-pressed US companies.

Most exporters would be very happy to see the dollar fall further than the Y110 level it has reached in the last week.

Many in the Congress – and, some suspect, in the administration – believe a strengthening yen, by hurting exports, and encouraging imports, ratchets up the pressure on Japan to open its markets. Some administration officials hope the dollar's weakness will help to ease some of these industrial and political pressures.

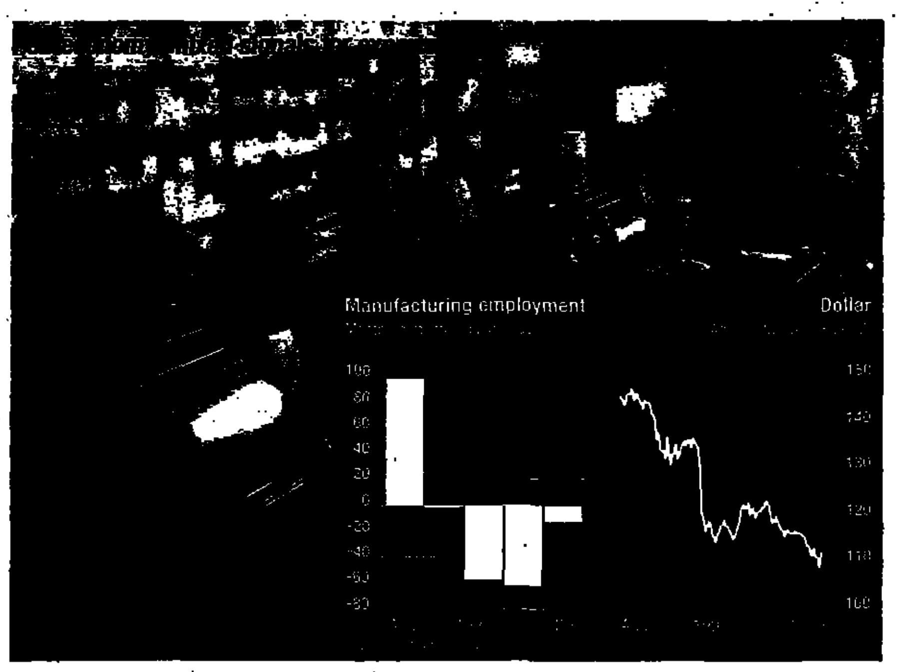
In these circumstances, any US measures that could be seen as pushing down the yen might not be politically wise.

"In the current political environment, the administration needs to keep its Democratic base happy. Since manufacturing industry and its labour unions are an important part of that base, a policy designed to strengthen the dollar might not help much," says Robert Hormats, a former administration official now at Goldman Sachs, the New York investment bank.

But if that impression takes hold, it could signal to currency traders that the administration is happy to acquiesce in the further decline of the dollar for political reasons.

Yesterday's remarks by Mr Rubin need to be seen in this context. Some observers believe the Treasury is indicating it will not allow the politics of trade disputes to dictate foreign exchange policy.

"That's not what's likely to drive the Treasury's policy", says Mr Hormats.



Instead, the weakness of the dollar poses two potential problems for the US.

First, while the strain it is placing on Japan may be good for US exporters, it could have a further damaging effect on the world economy.

If Japan continues to stagnate, the global crisis that convulsed the world last year could easily return.

Second, any weakening of the dollar poses specific risks for the US. Though higher import prices are not a serious concern in a period of quiescent inflation, the potential impact on financial markets is worrying.

If a sliding dollar damages the attractiveness of US financial assets in the eyes of international investors, that could spell trouble for the whole economy.

Does that mean the US may now be ready to support the Bank of Japan with co-ordinated intervention? Not necessarily.

Since Mr Rubin joined the Treasury, the US has become a very infrequent participant in co-ordinated attempts to move currency markets.

"The Treasury's approach is one of active caution – if that's not an oxymoron," says Dan Tarullo, who was President Bill Clinton's adviser on international economics until a year ago. "They know forex intervention is a tool whose utility diminishes with use – only when there is a very clear case for action and a very high probability of success, do they act," he says.

In any case, it seems unlikely that there is any "line in the sand" which the dollar could cross that would prompt immediate intervention by the US. Speculation that the Treasury might act as soon as the dollar slipped below Y105 or Y100 is almost certainly unfounded. What is more likely to cause concern is the risk of sudden volatility, threatening to produce big swings in financial markets.

But the political pressures are still strong and officials cannot relish the possibility that one day they might be seen to come to the aid of Japanese exporters. The best hope for the US administration must be that the Japanese intervention works on its own and that the dollar-yen rate stabilises soon.

Keizo Obuchi, Japanese premier: still facing hard times AP

Japanese and Germans eye co-ordination on currencies

By Ralph Atkins and Frederick Stüdemann in Bonn

Keizo Obuchi, Japan's prime minister, last night said his government wanted a stable yen, insisting the Japanese currency should have an importance equal to the dollar and the newly launched euro.

Visiting Germany on the last stage of a European tour, Mr Obuchi also won backing from Gerhard Schröder, German chancellor, for his proposals on "tripartite co-operation" between Japan, Europe and the US aimed at greater stability in the world currency markets.

Mr Schröder said the ideas presented by Mr Obuchi were "a good basis for discussions by G7/G8 finance ministers but which will also be developed further at the Cologne summit of the G7/G8 [in June]." The chancellor said it was the task of both governments to ensure "more transparency and co-ordination" in international financial markets.

The Japanese ideas on currency co-ordination have received a warm welcome in Bonn. Oskar Lafontaine, Germany's finance minister, has repeatedly called for the international community to agree measures which would help avert damaging volatility and excessive speculation in currency markets. Bonn fears the crisis in Asian economies will hit German economic growth this years.

Mr Obuchi said the launch of the euro at the start of this year, to replace national currencies within European states, was "very important for the stabilisation of the international currency situation." Up until now, the dollar had taken the lead role.

Japan was now looking for international agreement on measures "so that the currency situation in the whole world can be improved further". He insisted the yen was "just as important as the other currencies, the dollar and the euro". Governments he had spoken to were not opposed to the yen having a high value.

Mr Obuchi said his government was looking to improve the strength of the Japanese economy to underpin the national currency.

"Our policy should be to drive forward the stabilisation and strengthening of the yen and I hope that this will be successful," Mr Obuchi said.

Separately, Mr Schröder and Mr Obuchi also agreed to combine Japanese and EU efforts at stabilising the Russian economy. Mr Schröder said Germany, which holds the presidency of the EU, and Japan should act together more than in the past in deploying the "considerable resources of the two countries".

Other topics covered during the talks at the Bonn chancellery included reform of the United Nations and agreement on a joint effort to strengthen the role of the UN general secretary.

Spotlight falls on need to finance US deficit

By Alan Beattie in London

The yen's surprising rise against the dollar has confounded traditional thinking in the currency markets.

By most usual arguments, the yen should be a weak currency. Even with the recent rise in Japanese government bond yields to 2 per cent, the return from holding yen denominated assets is still relatively low. Meanwhile the stricken Japanese economy shows no signs of emerging from its troubles.

But since the collapse of the US hedge fund, Long-Term Capital Management (LTCM), and the precipitate drop in the dollar in October last year, when it fell by Y20 in a few days, traders in international financial markets have sharply reduced their exposure to risk.

"The situation at the moment is almost like the 1950s and 1960s," says David Bloom, currency strategist at HSBC in London, "when currencies took their lead from current account surpluses and deficits."

The lack of activity in financial markets has put the spotlight on the huge US current account deficit, which dumps $10bn a month into global financial markets.

Unwillingness among Japanese investors to add to their huge stock of overseas assets has threatened a shortfall in funding for the US deficit, contributing to the dollar's fall.

Previously, speculative market participants such as hedge funds also provided support for the dollar by borrowing in yen and then changing it into dollars to take advantage of the higher yield available in US assets.

But after the sharp drop in the dollar last October caught out many hedge funds, the enthusiasm for this "yen-carry" trade has declined.

"Although many investors are still keeping their money in hedge funds, risk appetite in the hedge fund industry has still not regained its levels before the LTCM collapse," says Dana Moore of Global Asset Management.

Japanese investors are also feeling the pinch after seeing the yen value of their dollar-denominated assets plummet last year. This may make them less willing to invest abroad.

As the realisation grows that liquidity may be slow to return to the world's markets, market strategists have revised down their forecasts for the dollar against the yen.

Ravi Bulchandani, chief currency economist at Morgan Stanley Dean Witter in London, was one of the first to predict the effects of thin markets pushing up the yen.

"In illiquid markets capital flows matter," he said in a research note published at the beginning of November last year, "and current and prospective flows in the dollar/yen market are stacked against the dollar."

Slowdown seen for US

US economists remain pessimistic about Asia's prospects and foresee a significant slowdown in US expansion in 1999, the National Association of Business Economics (Nabe) said yesterday, Reuters reports from Washington.

A survey of 130 Nabe members found US business had improved performance in the final quarter of last year from the third quarter, as strong capital spending offset a squeeze on manufacturing. But they said the outlook was not promising.

"During the first half of 1999 Nabe panellists expressed caution going forward, probably given the uncertainties in Asia. Panellists expect relatively weak economic performance there, with only one third anticipating a turnaround in Asia before December 1999."

Continuing economic doldrums in Asia meant US companies would have difficulty raising their prices and would have to trim costs to boost profits, Nabe said.

Investors favour Asia-Pacific

By Jane Martinson, Investment Correspondent

Fund managers favour the Asia-Pacific region, excluding Japan, above all other investment areas because of the impact of a weak dollar and increased enthusiasm about the area's economic outlook.

An international survey of 260 managers with assets of $6.86bn, carried out for Merrill Lynch, the US investment bank, found last week that enthusiasm has grown since the dollar started to weaken in September. Managers believe the weak dollar could prompt an export-led recovery in the region and allow countries to cut interest rates.

The most favoured countries are those with a currency pegged to the dollar, such as Hong Kong.

Trevor Greetham, global strategist at Merrill Lynch, said: "The enthusiasm is based on the belief that Asia will recover as long as the dollar remains weak."

Some 77 per cent of fund managers in the Asia-Pacific region expect their economies to strengthen over the coming year. This compares with just 41 per cent in October. Japanese managers are the second most optimistic about their domestic economy, with just over 60 per cent seeing an improvement.

US and UK managers are among the least positive about domestic economies. The former expect gross domestic product to increase by 2.2 per cent in 1999.

Enthusiasm for the Asia-Pacific region started when the dollar began to fall. Asia-Pacific fund managers have since begun to buy more shares, cutting their holdings in cash from 21 per cent of total holdings in September to 5 per cent.

Some 20 per cent of all fund managers surveyed believe the dollar will be the world's strongest currency this year. By contrast, 69 per cent favour the euro.

Three quarters of UK managers expect the pound to weaken against the euro over the next 12 months.

Chinese trade data skewed by fraud and smuggling

By James Kynge in Beijing

China announced yesterday that its foreign exchange reserves increased to $145bn last year, raising the embarrassing question of where most of the $88.9bn in reported trade and investment gains has gone.

In the past, the increase in China's forex reserves has mirrored the gains from the country's trade surplus and inward investment. But last year the reserves climbed just $5.1bn from a year earlier despite a trade surplus of $43.6bn and inward investments of $45.3bn.

Chinese officials and economists said that there were many reasons for the yawning discrepancy, some of which are widely known and others which have only recently become clear.

"The number of illegal activities last year means that both the trade surplus figure and the investment inflow figures are very inaccurate," said one trade official.

Another trade official said: "The figure for foreign direct investment in 1998 is exaggerated. A lot of it is money which has been promised but not invested in China."

Officials said that another distortion arose from the fact that some foreign currency loans, especially from Hong Kong, appear in China's statistics as direct investment. A significant number of these loans are believed to have gone to Chinese entrepreneurs, mostly in southern China, who have created fake foreign ventures by setting up a shelf company in Hong Kong and then using it as a "joint venture" partner.

Other explanations included increased profit repatriations by foreign companies, currency fluctuations affecting the dollar value of the reserves and the fact that from the start of this year, some enterprises have been allowed to keep 15 per cent of their foreign currency export earnings.

Export figures may also have been inflated by another scam – the shipment of fake goods, or even virtually empty containers, abroad. In one example, sand was poured into computer casings to replicate the weight of real computers in the hope of avoiding detection by customs officials.

Officials said that the volume of fake exports, combined with the notional value of forged export certificates, has been considerable, though no figures were available. Export certificates are useful in China because authorities often require to see them before granting permission to import.

Several irregularities have occured to skew import data. The titanic battle that security forces fought last year against smuggling indicates that the volume of smuggled goods has been huge.

Gun battles have flared between smugglers and police, accounting for a fair proportion of the official toll of more than 400 murdered police officers last year. Beijing has established a special anti-smuggling security force because customs authorities in some localities can no longer be trusted.

Import documents have been forged to the tune of "several billions of US dollars", officials said. But once the foreign exchange has been obtained, it has often either been sent abroad to seek investment returns or been used to buy smuggled imports.

It is clear that the battle against smuggling and foreign exchange fraud will rage for some time.

Province decides on asset injection

By Louise Lucas in Hong Kong

Guangdong provincial government yesterday said it would inject assets into Guangdong Enterprises (Holdings), known as GDE, to enable its biggest commercial enterprise outside China to "resurrect" itself. GDE group yesterday admitted to debts of US$2.9bn plus US$265m outstanding guarantees.

Creditors at yesterday's meeting were told the provincial government had decided to inject assets with strong cashflow and profit as well as cash into GDE to rebuild international creditors and investors' confidence in the embattled group.

GDE has faced increasing difficulty meeting its debt repayments after the collapse of stablemate Guangdong International Trust & Investment Corp (Gitic) – the investment agency which folded in October with US$4.37bn of debts, but received no government financial support, to the chagrin of bankers who had lent on the back of such implicit guarantees. Creditors of GDE are being asked to waive principal repayments until April 15.

Analysts said the government may have been forced to act over GDE by the need to retain confidence in at least one category of international fund-raising vehicles. Wary bankers have cut back on credit in the wake of Gitic; standing back and letting GDE fail would further alienate other investors.

GDE's total debt servicing needs are estimated to reach some US$1.2bn by the end of April (principal plus interest), while cashflow is expected to fall "substantially short", Guangnan (Holdings), a listed unit of GDE, said in a statement to the Hong Kong stock exchange.

Guangnan attributed part of GDE's problems to volatile markets and bad investment decisions.

OUTSTANDING BALANCE LARGE-SCALE WRITE-OFFS ☐ UNDERLYING DECLINE PROMPTS FEARS OF CREDIT CRUNCH

Japanese bank lending falls 4.7%

By Gillian Tett in Tokyo

The balance of outstanding loans at Japanese banks fell 4.7 per cent in December compared with a year earlier, the largest such drop since records began in 1991, the Bank of Japan said yesterday.

The fall partly reflected large-scale write-offs by Japanese banks, which cause the loans to disappear from the data. After adjusting for this, the balance of "real" lending fell only 1.6 per cent in December, the bank said.

However, this 1.6 per cent decline was also a record, and thus will fuel concern that Japan's economy is being damaged by a so-called "credit crunch".

The data highlight the degree to which some Japanese banks are starting to restructure their balance sheets in response to mounting market pressure and government reform plans.

The bank also revealed that banks' overseas assets have been dropping sharply in recent months as some Japanese banks have withdrawn from global operations.

In October, the most recent available month for which data are available, banks' overseas assets fell below Y100,000bn ($898bn) for the first time for 15 years to Y96,800bn. This was almost Y13,000bn lower than the level in September and Y47,000bn lower than the level in October 1997.

This reflects the fact that Japanese banks have been scrambling to cut assets to improve their weak capital adequacy ratios. In particular, the Bank of Japan and Financial Supervisory Agency have recently stepped up demands that weak banks should withdraw from overseas operations in order to improve their financial health.

Nevertheless, the bank and FSA now face a difficult policy dilemma over the degree to which they should encourage weak banks to reduce domestic loans. Although some officials recognise that the banks need to cut domestic loans at the same pace as overseas loans, they fear that any sharp reduction in lending levels could exacerbate the "credit crunch" and hurt the economy.

Consequently, the bank has recently responded to political criticism over this credit crunch by offering to increase its own loans to banks which promise to pass the money on to companies.

However, yesterday's figures indicate that this policy has had limited success so far. Combined outstanding loans at city banks, long term credit banks and trust banks fell 3.1 per cent in the year to December, after removing bad loan write offs.

Outstanding loans at regional banks, however, rose 0.7 per cent, while loans from second tier regional banks rose 2.7 per cent.

Mahathir criticises 'inaccessible' aid plan

By Michiyo Nakamoto in Tokyo, Sheila McNulty in Kuala Lumpur and Sander Thoenes in Jakarta

Mahathir Mohamad, Malaysia's outspoken prime minister, criticised the Japanese government for its slowness in responding to the country's economic problems and complained that Japanese aid under the new Miyazawa plan was not sufficiently accessible to provide a rapid response to the region's financial and economic problems.

In an exclusive interview in yesterday's publication of the Mainichi, a Japanese national daily, Dr Mahathir made unusually critical remarks about the Japanese response to the crisis in the region. Dr Mahathir, who in the past has been full of praise for Japan, said Tokyo needed to act more swiftly to stimulate its domestic economy and ensure currency stability.

While saying that Malaysia's fixed exchange rate would remain until hedge funds were regulated, he warned that an excessively strong yen could force the country to abandon the fixed rate.

Dr Mahathir noted that the yen's instability made it difficult for the Japanese currency, which has moved erratically in recent months, to become a key currency in the same way that the euro will be for Europe. But most notable was his criticism of the New Miyazawa Initiative, named after finance minister Kiichi Miyazawa, to help the five most troubled countries in the region with $30bn in aid.

Countries wanting to take advantage of the Miyazawa plan have to go through a highly complicated process that made the funds inaccessible, Dr Mahathir said. Malaysia has been one of the biggest beneficiaries of the initiative so far.

Japan has committed itself under the plan to providing a two-step loan of $500m through the Japan Export-Import Bank and has guaranteed a $560m structured loan from Sumitomo Bank of Japan. The Sumitomo loan was made available at an all-inclusive cost of funds of 3.4 per cent, equivalent to an AAA rating.

The Japanese government has also pledged another $5bn under the Overseas Economic Co-operation Fund (OECF) at interest rates ranging from 0.75 per cent to 1.7 per cent.

Thailand has received commitments for a total of $1.85bn for economic and financial restructuring, while Korea is to receive a total of $3bn, including $2.3bn in untied loans.

But Dr Mahathir, who has refused to seek International Monetary Fund assistance, is clearly growing frustrated with efforts to gain through alternate routes the M$62bn (US$16.3bn) in assistance Malaysia estimates it will need over the next two years. Asian countries have been lobbying aggressively to receive financial assistance under the New Miyazawa Initiative. One advantage is that the Japanese government is not insisting on economic and financial reforms, as a condition for receiving aid, as the IMF is.

Ginandjar Kartasasmita, Indonesia's co-ordinating minister for economy, finance and industry, is due to arrive in Tokyo on Friday to press for more details on the Miyazawa plan. He is expected to ask for $3bn and may also suggest some funding options.

A Japanese banker in Jakarta suggested neither Jakarta nor Tokyo had made up their minds about uses for the funds but said the money would be best spent on soft loans to selected export-oriented industries and infrastructure that would facilitate exports, which would bring in badly needed hard currency. "The money should go to the real economy," he said.

Trade credits are unlikely as an existing $1bn trade guarantee of Japan's Exim Bank, offered a year ago and set up after much delay last August, has barely been used. Indonesian banks are too hard up for cash to take risks on any letters of credit, and Jakarta only recently took up Japan's suggestion of insuring part of the letter of credit.

Mahathir: complained about highly complicated process AP

Hubco presses Pakistan for forex

By Farhan Bokhari in Islamabad and Andrew Taylor in London

Hub Power Company, Pakistan's largest private power generation company, yesterday served preliminary notices on the government and the state-owned power company accusing them of breach of contract.

The move appeared to escalate a dispute between the government and Hubco, in which National Power of the UK has a 26 per cent shareholder.

Hubco said that the government had failed to provide foreign exchange to the company to pay its foreign creditors.

"In accordance with the Implementation Agreement, the government has been notified of the breach which would entitle the company to treat such breaches as a government of Pakistan event of default," it said.

Analysts said the company had the option of issuing a final termination notice in three months if the government did not allow payments of dues.

The dispute began last year when Pakistani investigators accused Hubco of bribing officials in the government of Benazir Bhutto, the former prime minister, to win lucrative conditions such as a high tariff for the power it sells to the state-owned Water And Power Development Authority. The government unilaterally cut the tariff promised to Hubco under a revised contract finalised under the Bhutto government.

Analysts said yesterday's development could set back Pakistan's prospects for seeking an international rescue package of about $5.5bn, backed by the IMF and the World Bank.

National Power said in November that provisions to cover possible losses in Pakistan accounted for the bulk of a £30m ($50m) fall in half-year international profits after tax which fell from £67m to £37m. Group after-tax profits in the six months to the end of September before exceptional items fell from £208m to £180m.

N Korea in threat to nuclear freeze

By John Burton in Seoul

North Korea yesterday threatened to cancel a nuclear freeze agreement with the US after it accused Washington of delaying promised economic aid.

Analysts believe the latest threat is a bargaining tactic to win new concessions as North Korea and the US prepare to meet in Geneva this weekend.

Under the nuclear freeze accord signed in Geneva in 1994, North Korea promised to dismantle its suspected nuclear weapons programme in exchange for commercial nuclear reactors and fuel-oil supplies from an US-led international consortium.

But Pyongyang has complained about delays in the construction of the promised reactors, while oil shipments have slipped behind schedule. "We can no longer afford such losses," it stated.

"The US has not faithfully implemented any of its commitments. This compels the DPRK [North Korea] to expect nothing any longer from the Agreed Framework," North Korea's official newspaper Rodong Sinmun said.

It warned that "if the US reneges on the Agreed Framework and invites military confrontation, then the people's armed forces and our people will seek a solution according to a method of their choice".

North Korea and the US are due to meet in Geneva on Saturday to discuss a US demand for access to a suspected nuclear facility near the North's main nuclear complex at Yongbyon.

The talks come before four-party talks resume on Monday involving the two Koreas, China and the US on a peace treaty to replace the armistice that ended the 1950-53 Korean war.

North Korea is demanding the US pay $300m for a one-time inspection of the suspected nuclear site, which Pyongyang has claimed is for "civilian purposes". It has said it may accept other aid from the US in lieu of the $300m, which Washington has refused to provide.

NEWS DIGEST

SUPPORT FOR AUTONOMY

Australia upsets Jakarta with East Timor switch

Indonesia responded bitterly last night to Australia's announcement of a policy reversal on East Timor. Canberra had been one of the few western governments to recognise Jakarta's 1976 annexation of the island's eastern half but Alexander Downer, the foreign minister, said yesterday Australia would support autonomy and eventual self-determination for the East Timorese in what he described as an "historic shift" in policy.

Mr Downer qualified the policy change, saying Australia would continue to recognise Indonesian sovereignty over East Timor for the time being. He warned that an immediate move toward self-determination could "reignite civil war" in the province. Australia would prefer to see East Timor remain part of Indonesia, but would support any decision by the East Timorese to become independent after a period of autonomy, he said.

Mr Downer also called for a significant reduction, rather than withdrawal, of Indonesian military presence on the island. "The level of troops is far too high," he said. Indonesia yesterday expressed "deep regret" at Mr Downer's remarks and said the policy change could have an adverse impact on current international negotiations over East Timor. **Gwen Robinson, Canberra**

INDONESIAN POLITICS

Parliamentary threat to budget

Indonesia's parliament yesterday objected to budget allocations for a bail-out of the banking sector, putting at risk the most important element of the government's efforts to revive the economy.

With an eye on the first free elections in 40 years in June, members of four of the five parliament factions said the Rp18,000bn ($2.3bn) allotment for recapitalisation of some 70 private and state banks was too much taxpayers' money for the sake of a few rich Indonesians.

The dominant Golkar party also demanded revision of economic assumptions underlying the draft budget, due to take effect on April 1. They argued that the exchange rate might drop below the assumed Rp7,500 per dollar, called tax revenue targets overly optimistic and suggested the state reschedule more foreign debt to reduce expenditures. It is the first time in years that parliament raised any substantive obstacles to the budge. **Sander Thoenes, Jakarta**

CHINESE OFFICIAL

Taiwan meeting cancelled

A Chinese official visiting Taiwan has cancelled a scheduled Friday meeting with Taipei counterparts, casting a shadow over warming ties between the island and its mainland rival.

Yang Xiaoming, deputy secretary-general of Beijing's Association for Relations Across the Taiwan Strait, had been expected to call upon Shi Hwei-yow, secretary general of the Straits Exchange Foundation, the organisation through which Taiwan conducts its relations with the mainland.

Her decision to cancel the meeting was seen as a blow to preparations for an unprecedented tour of Taiwan by Wang Daohan, China's top Taiwan affairs negotiator. Mr Wang's visit has been billed by Beijing as signifying a new phase in the complex relationship between Taiwan and China, which split in 1949 after a civil war on the mainland. **Mure Dickie, Taipei and James Kynge, Beijing**

YEMEN SECRET FILES REVEAL PROBE INTO CLAIMS OF LINK BETWEEN ARREST OF BRITONS AND KIDNAPPINGS

Terror groups 'training in UK'

By Andrew Parker, Political Correspondent

The government yesterday found itself in the embarrassing position of admitting that it could not act against extremist groups accused of running terrorist training camps in the UK.

A confidential Foreign Office document obtained by the Financial Times reveals the government is aware of the training camps but that police have not moved against them. "Her Majesty's Government was aware of the existence of so-called training camps in UK and these were investigated by appropriate authorities. These investigations revealed no illegal activities," the document says.

No charges have been brought under a law passed last year, which for the first time made it an offence to conspire in the UK to commit terrorist offences abroad.

The Foreign Office document discloses police are investigating allegations that the kidnap of 16 tourists in Yemen on December 28 was directed by individuals in the UK. There are also allegations that the kidnap is linked to the arrest five days earlier in Yemen of five Britons on suspicion of terrorism.

Supporters of Shariah, an extremist Moslem organisation based in London, has admitted being in contact with the kidnappers. Last month the group organised an Islamic camp which offered "military training for brothers" at a mosque in north London. The group's website includes material from Osama bin Laden, the Islamic terrorist accused by the US of bombing its embassies in Africa.

Abu Hamza, head of the group, said he would "love it" if the Yemeni regime was overthrown, adding that violence was "justifiable".

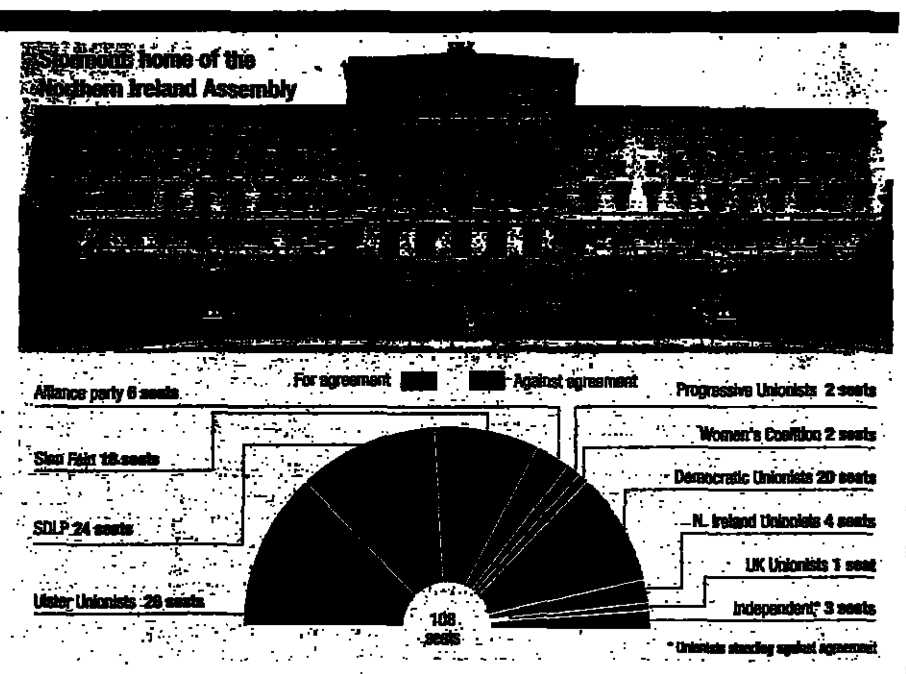
Families of the five arrested Britons confirmed that two of them are related to Mr Hamza. They warned there would be "blood on the streets" if the Britons were executed. Rashad Yaqoob, the families' spokesman, said Mohsin Ghalain, one of the five, was a stepson of Mr Hamza. He added that Mohammed Mustafa, who had evaded arrest with the five, was a son of Mr Hamza.

The Foreign Office document, referring to the five, says: "We understand the men were detained on suspicion of conspiring to carry out terrorist attacks on targets in Aden. We had no prior information about the apparent plans of the group, or about an alleged bombing campaign against British interests there."

Scotland Yard said: "We are aware of certain groups running survival courses. It is not an offence to run these courses providing the techniques taught do not break the law. If any breach of the law is brought to our attention it will be investigated and any appropriate action will be taken."

Government ready to transfer power to run ministries

N Ireland power sharing is not quite like regional government under way in the rest of the UK, **John Murray Brown** writes



Later this year, for the first time in more than a quarter of a century, real power will be returned to Northern Ireland, wielded by a motley group of career politicians, clergymen and former paramilitaries.

If the dispute over paramilitary arms can be resolved, the UK government will transfer responsibilities soon to the 108-member power-sharing assembly for 10 ministries covering agriculture, economic development, education, environment, finance and health and social services.

What is happening is not strictly part of the regional government which Tony Blair, the prime minister, has set in train for the rest of the UK.

There has long been cross-party support in parliament in London for restoration of some form of local democracy in Northern Ireland while the appetite in London for regional government in Scotland and Wales is much more recent. The main impact of the government's constitutional reforms in Scotland and Wales has been to help counter traditional unionist fears that Northern Ireland was being treated differently from the rest of the UK. It was always difficult for John Major's Conservative government to argue for regional government in Northern Ireland while denying it to the Scots and the Welsh.

Arthur Aughey, politics lecturer at the University of Ulster, believes that by fortuitous timing the Labour government has in effect neutralised the "integrationist" tendency among the dwindling band who stuck to the notion that Northern Ireland was "as British as Finchley" in the words of Margaret Thatcher. Finchley is the district of north London that Baroness Thatcher once represented in the House of Commons.

But the new assembly is just one element of a more ambitious constitutional settlement for Northern Ireland. This involves new relations between the region and the Republic of Ireland, and – separately – the British-Irish council linking the governments of the UK and republic with the Scottish parliament and Welsh assembly and the small legislatures in the Isle of Man, between England and Ireland, and the Channel Islands, between England and France.

Brendan O'Leary, politics professor at the London School of Economics, believes UK policymakers have always been "willing to contemplate constitutional novelties because Westminster has always viewed Northern Ireland as different from the rest of the union".

He says the UK government continues to think of two unions: the union of England and Wales with Scotland, and that of Great Britain and Northern Ireland – a product of the Act of Union of 1801, which the 26 counties of southern Ireland left in 1922.

Where regional government in Scotland is seen by the central UK government as a way to thwart simmering nationalist discontent, in Northern Ireland its main purpose is to encourage local politicians to work together. The complicated power-sharing formulae underpinning the assembly are designed to foster a cross-community consensus and thwart extremists. Particularly among nationalists there would still be some misgivings, given the 50-year experience of Stormont – "the Protestant parliament for a Protestant people", as unionists called it.

The Northern Ireland Act stipulates three categories of law-making powers: those unlikely ever to be transferred, such as foreign relations; those that could one day be transferred, such as policing and criminal justice that were handled by the home affairs ministry in earlier Northern Ireland administrations; and those already transferred.

Scottish poll deals blow to Labour party

By James Buxton in Edinburgh

The governing Labour party has suffered a reverse in the latest opinion poll for the Scottish parliament, dropping back to just ahead of the Scottish National party, which campaigns for independence for Scotland.

The survey, conducted by ICM for The Scotsman newspaper, also shows backing for Scottish independence lower than a year ago, though a majority would still vote narrowly for an independent Scotland in a referendum. Support for the Labour party in Scotland has dropped from 44 per cent in November to 38 per cent today, while the SNP is static with 36 per cent, the poll indicates. The Conservative party has 15 per cent, its highest score in the past six months, and the pro-European Liberal Democrats have 10 per cent, against 7 per cent in November.

If voting intentions were translated into seats in the Scottish parliament, for which the first elections will be held in May, Labour would have 55 of the 129 seats against 43 for the SNP, 17 for the Conservatives and 14 for the Liberal Democrats.

The Liberal Democrats could then choose whether to form a coalition with Labour or with the SNP. The Lib Dems have recently held informal talks with the Nationalists. Last June and July the SNP caused the government concern when it surged ahead of Labour in the Scottish opinion polls, before falling back.

● The Scottish Landowners' Federation yesterday criticised a government proposal to allow local communities to buy country estates at prices set by a government-appointed valuer instead of by the open market, unless the owners received full compensation.

Many landowners used land as collateral in borrowing money from bank to fund their operations, the federation said. The banking system would be disrupted if there was a sharp fall in the value of land as a result of the government's proposals.

It might consider taking a test case to the European court of human rights if land was bought by a local community at a price set by the government valuer that was well short of what the property might achieve on the open market and no compensation was paid.

NEWS DIGEST

EMISSION TARGETS

BP Amoco to acknowledge case for energy tax

BP Amoco, the oil company, will today acknowledge a case for imposing energy taxes on business. Rodney Chase, president and deputy chief executive, will set out a case for using targeted energy taxes in conjunction with emission targets for individual companies. He argues that an energy tax could be a powerful instrument for changing behaviour. He will make his case in a speech to the Fabian Society, a leftwing think tank.

The scheme proposed by BP Amoco requires the government to impose emission reduction targets on individual companies from an agreed baseline. If the company failed to meet its target, it would be taxed. Alternatively, companies could be rewarded by a tax reduction if they met the target. The scheme calls for taxes to be used in conjunction with voluntary agreements and "emissions trading", which allows companies to buy and sell surplus emission reductions "credits" from exceeding their reduction targets. **Vanessa Houlder, London**

FRENCH TELECOMS GROUP

Sagem to open R&D unit

Sagem, France's second largest telecommunications group, is to open a research and development operation in Chatham, in the south-east England county of Kent. Sagem, based in Paris, also has interests in the defence and vehicle sectors. Most of the 200 jobs being created in Kent will be for software and telecommunications engineers, primarily developing internet products.

The operation, on the site of a former naval dockyard, will house the R & D department of Sagem's terminals division, which makes fax terminals and mobile telephones.

Kent has about 20 French companies. The most recent was SBE, a mobile telephone repairer, which set up in Ashford two years ago and employs more than 100 staff. A year ago there was speculation that a wave of small French companies would move to Kent in search of lower payroll taxes, but the expected invasion never came about. **Brian Groom, London**

LIFE EXPECTANCY

Gap closing between sexes

The historic gap in life expectancy between men and women is closing, as the UK rate of improvement in the average male life-length has been 10 per cent higher than expected over the past 12 years. Average male mortality is improving significantly faster than female, according to an examination of the number of deaths amongst holders of Whole of Life Endowment policies by the Faculty and Institute of Actuaries. The trend is not expected to alter premium rates significantly in the short term.

The other key trend of the research is confirmation of the wide differential in life expectancy due to smoking. The mortality rate for women smokers is now twice as high as the rate for non-smokers, and for men 1.7 times higher. This means that, on average, 30-year-old women smokers will die seven years sooner than non-smokers. For males, 30-year-old smokers will die 5.5 years sooner than their non-smoking contemporaries. **Simon Buckby, London**

POSTHUMOUS NOMINATION

Ted Hughes on book prize list

Ted Hughes, the Poet Laureate, who died in October, has been shortlisted for this year's Whitbread Book Award, valued at £21,000 ($35,280). He won the Poetry Award, worth £2,000, for *Birthday Letters*, a personal account of his relationship with his first wife, poet Sylvia Plath, who committed suicide in 1963. Hughes won the Whitbread last year for *Tales of Ovid*. This year, the overall winner will be chosen on January 26. Since his death, Hughes's reputation has soared. On Monday, he won the 1998 T. S. Eliot Prize, worth £5,000, awarded by the Poetry Book Society to *Birthday Letters*. **Antony Thorncroft, London**

Companies' online data may be illegal

By Jim Kelly, Accountancy Correspondent

Leading companies could be breaking the law by improperly disclosing financial information on their internet sites, according to research published today by Bristol Business School.

Professor Roger Hussey found that, while FTSE 100 companies increasingly used their websites to disclose financial data, some put up unaudited information, or mixed audited with unaudited data without telling users.

He said: "Where information is unaudited or no statement is given, there is the concern over the lack of assurance to the investor." Day-to-day updates of information added to the risks.

References to audit "quite frequently fail to take the form required by company legislation", Prof Hussey said. Statutory requirements applied when publishing results electronically.

The survey, sponsored by Deloitte & Touche, the accountants, found that between August 1997 and March 1998, the number of FTSE 100 companies using their websites to disclose financial information rose from 54 to 68.

Use of the internet for financial reporting is growing fast because of the costs of traditional methods and the rise in demand for extra data about companies.

"But the study questions the credibility of the information due to lack of independent assurance," said Prof Hussey.

● Home internet usage in Britain more than doubled last year as more consumers went online, Paul Taylor writes. According to the fourth annual internet report prepared by Continental Research, to be published tomorrow, 25 per cent of the UK population have accessed the internet – 11.5m adults compared to 7 per cent in 1995. "The internet continues to grow at a fantastic rate," says Colin Shaddick, a director of Continental Research.

Setback for main BBC TV channel

By John Gapper, Media Editor

BBC1, the BBC's flagship television channel, gained less than a 30 per cent annual share of the UK viewing audience last year for the first time in its history, according to figures due to be published shortly.

The fall represents a psychological blow for BBC1, which has defended itself better than ITV, the main terrestrial commercial network, over the past few years against growing competition from Channel Four, Channel Five, and against cable and satellite.

It could also influence a panel appointed by the government yesterday to advise on setting the level of the licence fee up to the year 2006. The BBC spent £783m ($1.3bn) of its licence fee funding of £2.1bn last year on BBC1. The BBC, barred from broadcasting commercial advertisements on its radio and television channels, is funded by proceeds from the fee, a state levy on users of television sets.

The performance of BBC1 is watched keenly by advertisers because it is the strongest competitor to channels allowed to carry advertising. It is also important to the BBC's aim of providing a universal service.

Consolidated figures for 1998 show that the BBC1 share of television viewing fell to 29.5 per cent from 30.8 per cent the previous year. ITV's viewing fell from 32.9 per cent to 31.7 per cent over the same period.

Most of the loss of viewing was due to a stronger showing by Channel Five, which is partly-owned by Pearson, the owner of the Financial Times. Its share rose from 2.3 per cent in its launch year of 1997 to 4.3 per cent.

SOCCER ON TV COURT HEARS LEAGUE DEFENCE TO CARTEL CLAIM

Sport 'would be damaged by individual club deals'

By John Mason, Law Courts Correspondent

English soccer would be profoundly damaged if the Office of Fair Trading succeeded in ending the Premier League's ability to negotiate television rights collectively, the Restrictive Practices Court was told yesterday.

Insisting that clubs negotiate TV deals individually would damage the commercial prospects of all but the top football clubs and leave broadcasting companies in an unacceptably powerful position, lawyers for the Premier League argued.

The Premier League, the BBC and Sky Television are all opposing the move by John Bridgeman, director-general of fair trading, to end the collective agreement which the OFT maintains is anti-competitive and amounts to an illegal cartel.

Under the agreement which expires in 2001, Premier League clubs receive £743m ($1.2bn) from the BBC and Sky in return for television rights and the money is distributed among all clubs. The BBC is the publicservice broadcaster and Sky is the satellite network in which Rupert Murdoch's media group is the biggest stakeholder.

The OFT has argued that ending this agreement would give more broadcasters the right to buy soccer rights and increase consumer choice by allowing more soccer on television.

However, Charles Aldous, a lawyer for the Premier League, said the collective agreement was vital to the game's wellbeing. The division of the revenues allowed smaller clubs to compete, buy quality players and to improve stadiums.

He said that ending the collective agreement would mean some less well-off clubs would not survive, at least not without selling off top players.

"This will result in a free-for-all, with the Premier League being run for the benefit of major broadcasting companies who will acquire stakes in major clubs," he said. Big clubs would be forced to play matches at times dictated by television schedules while less fashionable clubs would struggle to sell their rights.

The government's football taskforce concluded earlier this week that the collective agreement was vital to football's future.

The hearing is expected to last about three months.

Elton John issues writ over 'loss of $34m'

By Alice Rawsthorn in London

Elton John yesterday issued a writ against Andrew Haydon, former director of William A. Bong, his holding company, and PricewaterhouseCoopers, its auditor. The writ claims that Bong lost £20m ($33.6m) because of negligence by both parties, and breach of trust by Mr Haydon.

Over the years, many pop stars have made similar accusations against their once-trusted advisers. The latest move comes when structural changes in the music market may make stars even more dependent on their advisers.

The relationship between pop stars and advisers, particularly managers, is so personal that it varies enormously. When the Spice Girls were managed by Simon Fuller, his company handled virtually every aspect of their affairs, from organising fashion stylists to helping them choose clothes.

Other stars prefer a hands-on approach. Mick Jagger was described by a former lawyer as "marching into my office and lecturing me on tax law, which he knew more about than I did, then slouching in his chair and pretending to look bored when outsiders, like the tea lady, came in".

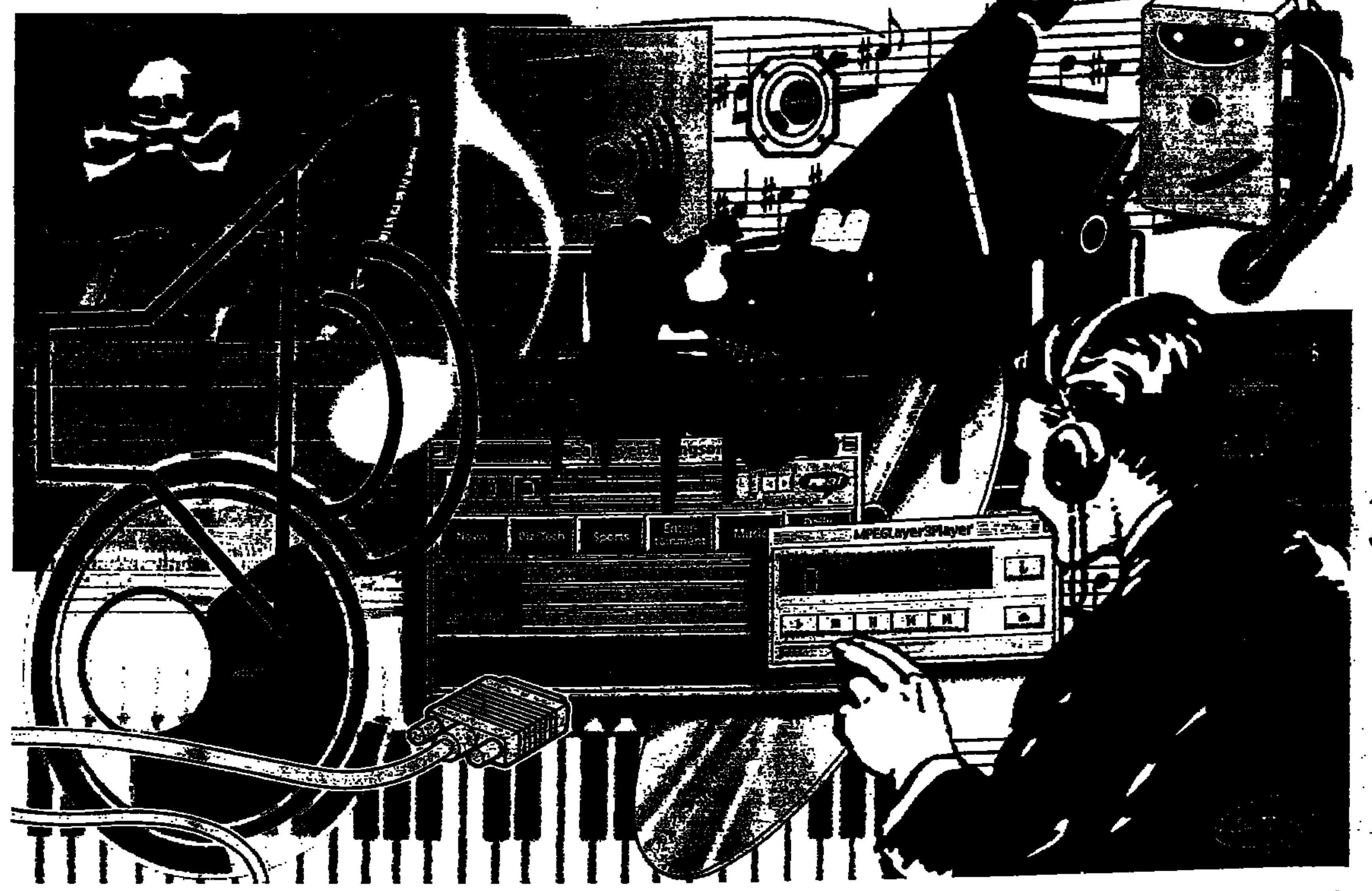
But most stars are either uninterested in finance, or so busy touring and recording, that they delegate responsibility for it. The earning power of enduring stars has rocketed, as has the value of the alleged frauds against them. Sting's former accountant was sentenced to six years' imprisonment in 1995 for stealing £6m from the singer.

Frank Presland, Elton John's personal lawyer, said yesterday he "could not possibly comment" on how much money his client earns, but estimated Bong's annualised turnover, mostly Mr John's touring income and song royalties, at $100m. He claimed that the £20m allegedly taken from Bong disappeared between 1986 to 1998, but only came to light early last year.

The value of such claims could become even higher in future if, as many observers predict, superstars sever their links with record companies by distributing their music themselves over the internet or other digital networks.

INFORMATION TECHNOLOGY ONLINE MUSIC SALES

Big five shudder at digital jukeboxes



Thousands of teenagers now routinely e-mail music to their friends. **Alice Rawsthorn** outlines a revolution in the industry

Early this year, a squad of International Business Machines engineers will be dispatched to San Diego to set up the Madison Project, an experimental system whereby consumers can order digital versions of albums to be delivered to their computers in six minutes.

Only a year ago, record executives dismissed the prospect of music being bought and sold on such systems as techie sensationalism. They have since been proved wrong by the thousands of teenagers who routinely download songs from internet sites in the form of MP3 computer files and e-mail them to friends.

Universal, Sony, Warner, EMI and Bertelsmann – the big five companies, which command 80 per cent of the $38bn (£22.6bn) global music market – are so anxious to sell online that they have agreed to participate in IBM's Madison Project in the US, and may take part in similar trials planned by British Telecom and Deutsche Telekom. They are also trying to agree a technical standard – the Secure Digital Music Initiative (SDMI) – on which they can operate pirate-proof online sales systems by Christmas 1999.

Whenever record companies have faced technological change before – from vinyl's invention, to that of the compact disc – initial scepticism has turned to enthusiasm when they realised how to make money from it. The big five hope the digital music market will provide another financial fillip but, unlike previous changes, this one threatens to redefine the relationship between record companies, their retail customers and recording artists.

The online and offline music markets could co-exist comfortably, if music continued to be sold over the internet in its present form of compact discs or cassettes purchased by mail order. Record stores would gradually lose market share to online specialists, such as CD Now and Music Boulevard, which are about to merge, and Amazon. Conversely, famous independent shops, such as Chicago's Dusty Groove, could broaden their customer bases. Record companies would continue to use the internet for promotion: EMI's sites now receive 1m hits a month. Prices would fall, as stores matched the discounts offered by online retailers with lower costs. Otherwise the industry would remain intact. Once digital delivery systems, such as the Madison Project, get under way, recordings will no longer be sold as physical products, but as digital signals. That means the growth of online sales has dramatic implications for manufacturing.

So far, the big five have been too worried about the dearth of legal or technical protection, and about the risk of upsetting traditional retailers, to participate in digital delivery. But there is now a vibrant underground scene of digital jukeboxes, such as IUMA and *MP3.com* in the US, which charge unsigned acts about $250 to post up their recordings. Consumers can hear the music online for free, or pay to download it.

Prices would fall, as traditional stores matched the discounts offered by online retailers

These legitimate digital jukeboxes are not direct threats to the music establishment. Most of their acts are too uncommercial to appeal to the big five, although a few have been snapped up – notably Sublime, which has sold 3.5m copies of an album for Universal since being plucked from IUMA.

But the industry is threatened by pirate jukeboxes relaying unauthorised copies of copyrighted music. The RIAA has taken legal action against several pirate sites, and employs digital detectives to surf the internet for others. Yet there are now thousands of pirate jukeboxes, and Forrester Research claims 150,000 songs are available on MP3 files.

The RIAA fears internet piracy will spiral out of control now that portable MP3 recorders, such as Diamond Multimedia's the Rio, which it tried unsuccessfully to ban last autumn, are in the shops. The Rio retails for $199 in the US, and similar products are in the pipeline, including the Yepp, a credit card-sized device manufactured by Samsung of South Korea.

The big five are intensifying their efforts to enter the digital music market. They signed a secret agreement to participate in IBM's Madison Project in November, and last month declared the SDMI plan. If all goes well, they will start digital delivery this autumn, and hope to create a lucrative business of selling direct to consumers, and keeping the retailer's profits.

As the digital music market expands (a recent IUMA study claims digital delivery will account for $3.7bn of the $19bn US market in 2007), the price of music is likely to fall. But record companies – if not traditional retailers – should be compensated for reduced offline profits by plump margins on online sales.

Yet those calculations assumed that the big five will continue to dominate the music market in the digital era – and that is far from certain. Traditionally, they have used their commercial clout to strengthen their market positions by bidding up the cost of everything from peak-time television advertising, to record shop windows and prominent display positions. The big five may have trapped themselves in a Hollywood-style cycle of escalating market costs, but they have also made it hard for smaller companies to compete against them.

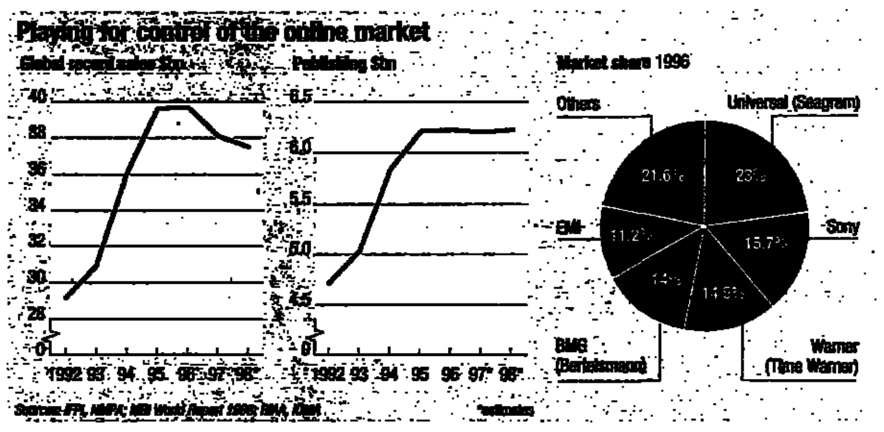
Size will be less of an advantage in the digital marketplace, where the barriers to entry – and to attracting consumers' attention – will be considerably lower. Digital jukeboxes are the online version of independent labels, but with such smaller cost bases that they may prove more resilient. Young musicians have always preferred to eschew multinationals by signing to hip independents. But those indie labels have often had to sell stakes to the big five after experiencing cashflow crises; which is how U2 ended up on Universal's roster and Oasis on Sony's. The multinationals may have less chance to prey on digital jukeboxes and, if the independent sector of the digital music market is financially more stable than its offline counterpart, bands like Sublime may be less inclined to leave it.

Yet these problems pale beside the risk of the big five losing control of their biggest assets: established superstars who may decide to bypass both record companies and retailers by handling their own distribution. Some acts have already done this, notably the late Frank Zappa, who built a lucrative mail-order business in the 1970s. But most stars continue to believe they need to tap into a record company's resources to distribute and to market their music.

The internet may provide an efficient alternative, particularly for established superstars, who have loyal fan bases and can afford to hire marketing consultants to handle promotion. Such stars could also negotiate securitised loans against their future royalties from investment banks (as David Bowie has done) to replace cash advances from record labels. They could even license the rights to retail distribution to a label or wholesaler. Lawyers say some superstars are now discussing the long-term possibility of handling their own internet distribution, rather than renewing record deals.

The big five are already trying to prevent this. Sony has instructed its labels to ensure that new and existing contracts include provision for various online rights, including artists' internet domain names. EMI recently demanded that the Beastie Boys remove MP3 versions of songs from their internet site: and Universal had a similar spat with Chuck D. The artists were forced to back down, but the big five know they will face far bloodier battles with their superstars over the digital music market in future.

Playing for control of the online market



Sources: IFPI, NMPA, MBI World Report 1998, RIAA, IUMA *estimates

US music $m

	1998	99*	2000*	01*	02*	07*
Traditional sales	12,366	12,622	12,927	13,041	12,806	[illegible]
Internet mail order	117	445	731	1,155	1,654	3,228
Digital delivery revenue	0	13	47	165	588	3,717
Total industry revenues	12,483	13,080	13,705	14,361	15,047	19,007

*forecast

JOHN W. HUNT **ADVISES**

Got the skills, but the face doesn't fit

US and UK firms dominate management consultancy despite the demand for a wide array of talents

Dear Professor Hunt,
I am a German management consultant with a Swiss-based firm. I would like to work with an American or British firm as they seem to dominate most markets. My problem is getting into one. I do not hold an MBA, but can offer several years' high-level experience in industry and an economics degree from a good German university. However, on several occasions US and UK firms have told me I do not "fit". Could this be to do with my lack of an MBA? Or my particular experience? Or could it be to do with my skills?

Prof Hunt replies:
Without knowing the specifics of your story I can't say for sure. However, within management consulting there is a huge array of different talents and needs – and if you are experiencing difficulty breaking into a US or UK firm you may need to focus your experience and knowledge more tightly on a particular niche in the marketplace. Talent is one thing: translating it successfully across cultures can be another matter altogether.

This may seem unfair, but – as you rightly conclude – US and UK firms are dominant throughout the world. Indeed, at a time when the world seems intent on talking itself into a recession, management consulting is a great success story, particularly in Europe. Surveys indicate that fee income in the UK for the top 100 firms increased by 37 per cent between 1996 and 1997, giving a total fee income in excess of £4bn. There was a similar increase in continental Europe, the overwhelming bulk of which was earned by UK and US firms.

A simplistic reason for such dominance is that the highly individualistic British and American cultures encourage those personal profiles that are suited to most forms of consulting. At strategic or top-team levels these typically comprise a high desire for autonomy, recognition, financial rewards, intellectual rigour and challenge – and they are less interested in managerial power or deep relationships with a stable team of people. Many are loners who relish the buzz of working on their own to solve problems for clients. You will find parallels in other professions such as corporate law, merchant banking, software development, and advertising.

UK and US cultures are rooted in a scientific, analytical belief in rational solutions to problems. This belief attempts to extract emotion and politics from the decision process; a practice far less evident in cultures with a greater interest in power and politics, or even the views of the collective.

MBA programmes reinforce both this rational approach and the skills required to hold to it. They also attract self-starters. So it is not surprising to see business school graduates meet the kind of profile the UK and US firms prefer. It is an arrangement which suits both the individual and the firm.

However, many MBAs who go into consulting on graduating do so because they are unsure of what career to pursue. Management consulting offers a chance to delay that decision a little longer and continue the – rather grand – analyses of business their school taught them.

In recent years there has been a shift to recruit consultants with more business experience, who have decided they are interested in consultancy as a permanent career and who may not have an MBA. So do not despair at your lack of an MBA – your time may be coming.

It is important you do not fall for the consulting hype. It is not for everyone. As the consultant, you are only an adviser and your clients experience the fun of managing. True, in global strategy or accounting-based firms there are people who do manage large numbers of consultants on complex assignments. However, they may be perceived by colleagues to be second-rate. The top consultants are the analytical, autonomous, creative problem solvers who have little ambition to get their hands soiled by managing others.

Further, there are many factors that drive people out of consulting. These include endless travel, long hours, too many nights away from home, and weeks on assignment in another city. While Moscow or Brussels may be exciting for the first three weeks, by the 10th week the hotel and/or the clients are becoming irritating. And as your expertise develops, your assignments begin to repeat as your reputation, for example, in financial control systems in the oil industry, starts to entrap you.

On the positive side you can be your own person. There is a lot of variety. If finding solutions rather than implementing them appeals to you, consulting is hard to beat.

So while the doors to consulting in US or UK firms may not be opening as readily as you might wish, the growth in this industry should encourage you.

However, if you still experience difficulties persuading a firm to see you, you should ask if consulting is really for you. After all, as a consultant your most important skill is your capacity to influence. If you do not have this skill, you are missing an important weapon from your armoury, and I would suggest you think a little harder about your career path.

John W. Hunt is Professor of Organisational Behaviour at London Business School and a consultant to private and public sector clients. This column appears fortnightly.

INFORMATION TECHNOLOGY BRIEFS

IT giants team up to prioritise online resources

Traditional corporate networks share network capacity, or bandwidth, equally among users and applications – regardless of their relative importance. This makes it difficult to ensure there is enough bandwidth for a specific function, event or process such as a video conference or e-commerce server – and thereby to maximise the return from investment in the equipment.

Now Microsoft, Compaq Computer and Cisco, three of the largest IT groups, have teamed up to develop a "directory enabled" technology.

It brings together Microsoft's active directory technology – built into the software group's forthcoming Windows 2000 operating system – and Cisco's networking services for active directory enabling a network to direct capacity to where it is most required. Compaq will act as the preferred integrator for the technology.

The initiative means, for instance, that a company's accounts department can demand extra bandwidth at year-end to handle the auditing process, or an international video conference can be booked online and sufficient bandwidth diverted to sustain the link.

Similarly, a financial services company could offer its most valuable clients priority access to a trading network.

"Networks will become more discerning," says Phil Smith, business development manager for Cisco in the UK.

"They will be able to channel power where it is critically required by the business but with sufficient deftness to apply privileges to individuals. That translates into greater return on investment from the network."
www.cisco.com

Different designs drawn in 3-D

In today's fiercely competitive manufacturing environment, where a product's life is often measured in months not years, easy access for everyone involved in the development cycle to product design data and onscreen 3-D images can bring significant business advantages.

The problem to date has been the technical, economic and functional barriers to integrating information from different design programs, and enabling easy access within different departments to users who are not skilled in the specialist software that created the data.

Division Group, the UK-based leading supplier of product data visualisation and simulation tools, believes it has developed the solution with dV/ProductView, a web-based software tool capable of integrating disparate digital product data.

Using dV/ProductView anyone with a standard web browser such as Netscape Navigator or Microsoft Explorer can access, visualise, inspect and annotate an onscreen virtual product, fly-through sequence or documents.

The new software can view a wide range of 3D Cad (Computer Aided Design) data, 2D drawings, documents, audio and multimedia files, real-time simulation data from Division's dV/MockUp tools and product meta data and has direct links to most product data management systems.
www.division.co.uk

TV breakthrough from Pixtech

The CRT (cathode ray tube) screen continues to defy those who predict its early demise – although a drop in LCD (liquid crystal display) prices over the past 18 months has resulted in more LCD monitors appearing on desktops.

LCD technology is not, however, the only alternative to traditional television tube CRT technology. Proponents claim Field Emission Displays (FED) can provide the picture quality of a CRT with the slender packaging of a liquid crystal display.

PixTech, a French technology company and FED pioneer, claims to have developed the world's first functional full colour 15in FED screen. The company, which demonstrated the first monochrome FED display in 1991, believes large, high-voltage FED technology will be ideal for multimedia applications such as desktop monitors and TV sets because of its CRT-like viewing quality, brightness and unrestricted viewing angle.
www.pixtech.com

Sony's desktop CD library

CD libraries can provide small business, department and workgroup network users with access to huge volumes of data such as graphics and sound files, medical records, legal archives and office applications. They enable users to share information and data without the need to exchange discs physically.

Sony's computer peripherals and components division has launched a new desktop CD library, the CDL1100, which allows 100 CDs – up to 65Gb of CD material – to be catalogued, housed centrally and accessed easily by networked users.

The system is supplied with SmartCD Neighborhood software that functions as an electronic bookshelf displaying the CDs as titled volumes or an electronic filing cabinet.

The unit's disc changer loads a CD in only 12 seconds and each unit has two CD drives capable of delivering between 1.2MB and 1.8MB of data a second.
www.sony-cp.com

Paul Taylor

BALLET IN TOULOUSE

Company keeps a classic identity

Nanette Glushak has burnished the abilities of her dancers to bring challenging masterpieces to a new generation, writes **Clement Crisp**

Regional ballet troupes in France sometimes seem in a state of flux, confusing to the foreign observer. Companies flourish (as did the Ballet de Nice latterly under Jean-Albert Cartier) and are then cut down in what seems their prime. Others have a Damoclean sword of uncertainty above their head, owed to regional politics and local funding. Others – for unguessable reasons – abandon a decent classical identity in an ill-advised switch of orientation to those unnatural practices known as French modern dance.

In Toulouse, happily, a strong ensemble at the Théâtre du Capitole maintains a bright and interesting classic identity and repertoire, under the direction of Nanette Glushak. A dancer with Balanchine, a principal dancer with American Ballet Theatre, she has burnished the abilities of her dancers and shows them off in a judicious selection of modern classics and new works. The most recent programme by the Ballet du Capitole, which I saw at the weekend, challenges its artists, and rewards them and their public.

The evening opened with Richard Tanner's *Ancient Airs*. It is one of those plotless ballets – set to Respighi's score of the same name – which are easily and unjustly dismissed as "well-made". Tanner worked with Balanchine, and his sense of construction, his vocabulary, owe everything to this. But the piece is not simply "in the manner of" the master; it is shapely, responsive to its score in manner and form, cleanly set-out. It was very well danced by Marieke Simons and Minh Pham and an ensemble, who caught the varied moods and technical felicities of the piece with a happy ease: watching it, one felt that the company had a clear understanding of classic style and the great good sense to enjoy it.

This was no less true of the dancing in Balanchine's *Raymonda Variations* which closed the evening. Here is a master-work, not because it scales any remote heights of inspiration, but because it shows that genius always means mastery in craft, and the mastery here is like that shown by Fabergé at his most subtly brilliant, when a cigarette case or a little cup is a triumph of the goldsmith's art. Balanchine uses a selection of numbers from *Raymonda*, dresses 12 girls in candy-pink, and sets them curvetting round a ballerina and her cavalier, in variations of blissful charm and difficulty.

The piece is nearly 40 years old. It might pass as a lost treasure of Petipa variations found and re-polished by his heir. It must also be seen as an assertion of the beauty of the *danse d'école*, true in 1961 (when Balanchine made it) as it was true in 1898, when *Raymonda* was new, and still true as 1999 begins. Each of the six variations that entrance the eye is by Balanchine, but in them he evokes his own Mariinsky heritage: super-Petipa, they are also super-Balanchine, and to the vast credit of the Toulouse dancers (and Nanette Glushak) they have the lustre of fine jewels, which they undoubtedly are. Even in this fleet-footed ensemble I must salute Magali Guerry for her exquisite account of her solo, a diamond of finest water, and note how well Evelyne Spagnol and her partner, Juan Polo, set out the beautiful pas de deux.

Dance with the lustre of a fine jewel: the company in Balanchine's homage to Petipa, 'Raymonda Variations'

A very different challenge to the company came with a revival of *Jardin aux lilas*. When it was made in 1936, Antony Tudor's ballet was markedly original. Masked by the conventions of Edwardian behaviour and pre-Freudian decorum – ah, those were the days – Caroline faces an arranged marriage and bids farewell to her lover, while her rigidly proper husband-to-be ends a relationship with a woman who has been his mistress.

The garden where we watch this is drenched in the scent of lilac blossom. The activities of the quartet are drenched in emotion which must not speak out loud. So good manners hold feeling in check, but we must feel the strain, know the nerves just beneath the skin, sense the emotions of the man who loves Caroline (it was made for Hugh Laing, who could suggest volcanic feeling barely under control) and know her anguish. Caroline was created by Maude Lloyd, an artist beautifully controlled and ultra-sensitive, and I was fortunate enough to see her demonstrate the first movement Caroline makes in the ballet: a hand passed lightly down the arm she holds behind her back. The entire character seems to lie in this one gesture.

With the original Hugh Stevenson designs well re-created for Toulouse, with the text mounted by Sallie Wilson who danced Caroline for Tudor with American Ballet Theatre (where Nanette Glushak was the Husband-to-be's mistress), and the score very well played by the Capitole orchestra under Claude Cuguillère, *Jardin aux lilas* looked right – no small achievement. Marieke Simons was a subtle Caroline; the other members of the quartet – Leon Pronk, Matthew Madsen, Sabine Mouscardes – showed proper understanding and will surely blossom in their roles.

A major work of art is alive – and catching at the heart of a new generation of audiences. The programme did honour to its choreographers and to its performers, and the scores under M. Cuguillère, were very well done.

NEW YORK THEATRE

Eloquence in the face of death

Brendan Lemon reviews an extraordinary playwriting debut by Margaret Edson

When Vivian Bearing, a professor of 17th century English poetry and the main character in Margaret Edson's stimulating new drama, *Wit*, discovers that she has advanced ovarian cancer, she approaches the tumour as if it were a literary problem awaiting solution.

She assembles a bibliography; consults experts; and employs a variety of scholarly approaches which involve what John Donne, her academic specialty, called "aggressive intellect". We know they are all doomed: early on, in one of the many monologues Bearing, bracingly played by Kathleen Chalfant, addresses to the audience, we are informed that at story's end she will, in fact, die. With no suspense of outcome, *Wit* must succeed entirely on its eloquence.

Although verbally dense, 'Wit' never feels wordy: the professor is far too clever for that

That it manages to do so, persuasively, is quite extraordinary, given that the play is Edson's debut and that she has written the most verbally dense American drama in many seasons. Even when Bearing is delivering a microscopically close reading of a poetic text, *Wit* never feels wordy. The professor is far too clever for that; as she undergoes painful chemotherapy, she is always finding sardonic delight in bodily decline. After an exhausting attack of nausea, for example, she peers up from her bedpan and says, "What's left to puke? You may remark that my vocabulary has taken a turn for the Anglo-Saxon."

Wit evokes Bearing's backstory with an overwhelming freshness. In an early-childhood scene with her father, as she stumbles over the word "soporific" in a tale by Beatrix Potter, we see the germ of the professor's fascination with language. During her undergraduate encounter with a Dame Helen Gardner-like don, we listen to a discourse on the metaphysics of punctuation that is near-Stoppardian in brilliance, cresting with the utterance, "The unescapable barrier between one thing and another is just a comma."

Edson pushes her animating comparison – between Bearing's close reading of her physical body and her explication of literary texts – to its extreme in the scholar's conversations with a careerist hospital fellow, Jason Posner (Alec Phoenix). He assures his patient that the two of them are alike – professionals who prefer research to humanity – and the fear that this observation may be accurate only heightens Bearing's discomfort.

Finding sardonic delight in bodily decline: Kathleen Chalfant, right, with Walter Charles in 'Wit'

After a particularly dispiriting session with him, she intones a sorrowful meditation on the theme of "Once I did the teaching/Now I am taught" that contains elegant echoes of the prison-cell ruminations of Shakespeare's Richard II.

Posner and Bearing are akin in their impatience with inexactitude, but *Wit*, wisely, does not push the parallel too far. After all, Posner is a reductionist; to him, Donne's "Holy Sonnets" are mere exercises in "salvation anxiety". To his patient, by contrast, they stand as a summa of cultural achievement. Moreover, they are situationally, if not spiritually, consoling: Bearing endures the time-wasting numbness of hospital tests by reciting "Death Be Not Proud".

Perhaps *Wit*'s one flaw is identified by Bearing herself, when the chemotherapy is failing and she is taking rigorous account of her life's disappointments. "I admired only studied application of wit," she rues, "not its spontaneous eruption." The play's lack of impulsive outburst, except when the professor is in agonising pain, at times gives the drama a too-schematic feel that lessens its emotional impact.

But that is a small price to pay for an evening that, while dwelling on death, avoids bathos almost entirely. Credit not only the playwright but the director, Derek Anson Jones, whose staging is as no-nonsense as Bearing's personality, and the scenic designer, Myung Hee Cho, whose rod-and-curtain set conveys an appropriate clinical chill.

Union Square Theatre, Off-Broadway, New York.

OPERA SAMUEL BARBER'S 'VANESSA'

A chilly tale with no tunes

The 1950s was a prodigal decade for new operas, but history is ruthlessly sorting out the winners from the losers. What of Samuel Barber's *Vanessa* – so lavishly praised at its New York premiere, but neglected now?

It does not say much for the opera's hope of survival that its first UK performance should have to wait more than 40 years and then take place in a studio theatre and with only a piano for accompaniment. This is not to denigrate the fine effort made by The Other Theatre Company, merely to point up the contrast with – for example – Britten's operas, as they circle the globe.

It is difficult to put a finger on what is lacking in *Vanessa*. The story, a sombre romance set in a country manor where the chandeliers are dimmed and the mirrors draped, has the chill of Chekhov about it. The characters may not have much warmth to them, but their reserve adds a certain mystery.

The music, like most of Barber, is spiky enough to sound modern, while still having its heart in the 19th century. Callas reputedly turned down the title-role because she said the opera had no tunes. This is not as naive a judgment as it may sound: Barber's score always seems to be on the point of delivering a real melody, but never does. Did he baulk at letting in a good old-fashioned tune, or was he unable to write one?

The result is an opera that is well judged, neither too derivative of earlier operas, nor too far out on a limb to deter the regular opera-going audience. But there is little in *Vanessa* – a character, a situation, or anything specific in the music – that draws the audience in rather than leaving them to observe from the side-lines.

Even if out of necessity, The Other Theatre Company's production capitalised on the sense of confinement in this claustrophobic household. It is not easy to play opera at such close quarters and the cast did very well to keep the drama so convincing, especially Louise Mott in the opera's most interesting role as the spurned younger lover, Erika. The exception was Evan Bowers's wooden Anatol, but he wielded an impressive young tenor voice as compensation.

It would have been easier for the singers with the soft carpet of Barber's orchestration beneath them, but the piano accompaniment was exemplary. About half way through I noticed there was also a conductor, perched behind the audience by the door, beating time happily. The pianist could only see him with the aid of a tiny monitor, and the singers never seemed to look, but maybe you cannot have a serious opera without one.

Richard Fairman

At the Lyric Studio, Hammersmith, London W6.

INTERNATIONAL

Arts Guide

BERLIN

EXHIBITION
Hamburger Bahnhof
Sensation: works from the Saatchi collection of Young British Artists including Damien Hirst, Rachel Whiteread and Mark Wallinger. Originated at the Royal Academy in London last year, where it attracted 350,000 visitors and maximum publicity; to Jan 17

BIRMINGHAM

EXHIBITIONS
Birmingham Museums and Art Gallery
Tel: 44-121-235 2834
Sir Edward Burne-Jones: comprising more than 200 works, including tapestries and jewellery as well as paintings. A second generation Pre-Raphaelite, Burne-Jones had a lifelong working relationship with William Morris, for whose firm he worked as a principal designer; to Jan 17

COLOGNE

OPERA
Oper der Stadt
Tel: 49-221-221 8240
Die Vögel: first modern staging for Walter Braunfels's opera. Premiered in 1920, it was banned by the Nazis and largely forgotten until a recent recording. This production is conducted by Bruno Weill and staged by David Mouchtar-Samorai; Jan 15

LONDON

CONCERTS
Barbican Hall
Tel: 44-171-638 8891
● BBC Symphony Orchestra and Chorus: conducted by Andrew Davis in works by Messiaen. With piano soloist Stephen Osborne; Jan 16
● BBC Symphony Orchestra and Chorus: conducted by Andrew Davis in works by Messiaen. With piano soloist Yvonne Loriod; Jan 17
● London Symphony Orchestra: conducted by Ryusuke Numajiri in works by Saint-Saëns and Tchaikovsky, as well as the UK premiere of Sofia Gubaidulina's The Canticle of the Sun. Featuring cello soloist Mstislav Rostropovich; Jan 13

EXHIBITIONS
Royal Academy of Arts
Tel: 44-171-300 8000
Monet in the 20th Century: arriving in London from Boston, this exhibition brings together late works by the founder of Impressionism. The 80 works on display include important public and private loans, culminating in a group of seven of the monumental water lily paintings which were the triumph of his career; from Jan 23 to Apr 18

Tate Gallery
Tel: 44-171-887 8000
John Singer Sargent: large-scale retrospective containing 150 paintings, including major public and private loans. Includes late landscapes and American and British society portraits from the 1880s to the early 1900s; to Jan 17

LOS ANGELES

OPERA
L. A. Opera, Dorothy Chandler Pavilion
Tel: 1-213-972 8001
www.laopera.org
Madama Butterfly: by Puccini. Conducted by Marco Guidarini and directed by Christopher Harlan. With a cast including Yoko Watanabe, Richard Leech and John Atkins; Jan 13, 16, 19

MILAN

EXHIBITION
Palazzo Reale
Tel: 39-02-8691 5738
L'Anima e il Volto: (The Soul and the Face): major exhibition of portraiture, comprising 370 works ranging over 400 years. Artists represented include Titian, Caravaggio, Van Dyck, Picasso and Francis Bacon; to Mar 14

OPERA
La Scala
Tel: 39-02-88791
The Fiery Angel: by Prokofiev. Bruno Bartoletti conducts a staging by Giancarlo Cobelli, with Karen Huffstodt and Elmira Magomedova singing alternate performances as Renata; Jan 14

MUNICH

CONCERTS
Philharmonie Gasteig
Tel: 49-89-5481 8181
● Munich Philharmonic Orchestra: conducted by Ivan Fischer in works by Stravinsky and Bartók, with violin soloist Ivan Fischer; Jan 14, 15
● Philharmonia Orchestra London: conducted by Christoph Eschenbach in works by Mozart, Prokofiev and Brahms. With piano soloist Tzimon Barto; Jan 17

OPERA
Bayerische Staatsoper
Tel: 49-89-2185 1920
www.staatstheater.bayern.de
Lohengrin: by Wagner. Peter Schneider conducts, in a staging by Götz Friedrich. Cast includes Adrianne Pieczonka and Waltraud Meier; Jan 15, 19

NEW YORK

DANCE
New York City Ballet, New York State Theater
Tel: 1-212-870 5570
Celebrating Five Decades of Repertory: New York City Ballet has the largest repertory of any dance company in the world. Continuing the celebrations of its 50th anniversary, it presents a selection of works from that repertory, including revivals of Bugaku, Irish Fantasy and Blanchine's Liebeslieder Walzer; Jan 13, 14, 15, 16, 17, 19

EXHIBITIONS
Metropolitan Museum of Art
Tel: 1-212-879 5500
www.metmuseum.org
● Dosso Dossi, Court Painter in Renaissance Ferrara: Dosso Dossi was the last of the Ferrarese painters, much influenced by Giorgione and Titian. This exhibition includes rarely lent masterpieces from the Borghese Gallery in Rome and other European collections; from Jan 14 to Mar 28
● Heroic Armour of the Italian Renaissance: Filippo Negroli and His Contemporaries. *Comprehensive survey* of the classically inspired armour made by the most celebrated Italian armourer of the 16th century. Includes more than 60 richly decorated suits of armour, worn by Renaissance kings and captains. Includes public and private loans from Europe and North America; to Jan 17
● Sacred Visions: Early *Paintings from Central Tibet*. 60 works from the 11th to the mid-15th century, including thankas (paintings on cloth), painted book covers and related sculptures; to Jan 17

OPERA
Metropolitan Opera, Lincoln Center
Tel: 1-212-362 6000
www.metopera.org
● Die Fledermaus: by J. Strauss. Revival conducted by Patrick Summers. Cast includes Carol Vaness, Jochen Kowalski and Bo Skovhus; Jan 14
● Werther: by Massenet. Donald Runnicles conducts a staging by Paul-Emile Deiber. Cast includes Susan Graham and Thomas Hampson; Jan 15, 19

PARIS

CONCERTS
Salle Pleyel
Tel: 33-1-4561 6589
Orchestre de Paris: conducted by Lorin Maazel in works by Weber, Debussy, Schubert and Ravel; Jan 13, 14

PRAGUE

DANCE
National Theatre of Prague
Tel: 420-2-2108 0131
www.anet.cz/nd
The Nutcracker: by Tchaikovsky, in a staging by Russian choreographer Jurij Grigorovic, with sets and costumes by Simon Virsaladze; Jan 15, 16

ROME

EXHIBITIONS
Palazzo delle Esposizioni
Tel: 39-06-474 5903
Valori Plastici: taking its title from that of a short-lived magazine published by Roman art dealer Mario Broglio, this show includes sculpture and paintings, mainly by Italian artists, but also including works by Picasso, Klee and Grosz; to Jan 18

Palazzo Ruspoli
Tel: 39-6-6830 7344
www.palazzoruspoli.it
The Denis Mahon Collection: last stop for the touring exhibition of more than 80 Italian baroque paintings collected by Denis Mahon. Includes works by Guercino; to Jan 15

WASHINGTON

OPERA
Washington Opera, Kennedy Center
Tel: 1-202-295 2400
www.dc-opera.org
The Crucible: by Robert Ward. New production by Bruce Beresford, conducted by Daniel Beckwith, with sets and costumes by John Stoddard. Cast includes Kimm Julian and Susan Tilbury; Jan 15, 17

TV AND RADIO

● **WORLD SERVICE**
BBC World Service radio for Europe can be received in western Europe on medium wave 648 kHZ (463m)

EUROPEAN CABLE AND SATELLITE BUSINESS TV

● **CNN International**
Monday to Friday, GMT:
08.30: *Moneyline with Lou Dobbs*
13.30: *Business Asia*
19.30: *World Business Today*
22.00: *World Business Today Update*

● **Business/Market Reports:**
05:07; 06:07; 07:07; 08:20; 09:20; 10:20; 11:20; 11:32; 12:20; 13:20; 14:20.

At 08:20 Tanya Beckett of FTTV reports live from LIFFE as the London market opens.

MARTIN WOLF

Too little, too late

The Bank of Japan's intervention against the yen is not enough. It should drive the yen and long-term interest rates down

The decision of the Bank of Japan to intervene in the currency markets yesterday is too little and comes too late. The passivity of the Japanese authorities in the midst of an unfolding disaster remains astounding. It is also highly dangerous.

Between the beginning of August and this Monday, the yen appreciated 35 per cent against the dollar. Since late September, the market in Japanese government bonds has collapsed, with yields rising from 0.75 per cent to 2 per cent (see chart). But this happened to an economy already in the grip of deflationary pressures: wholesale prices fell 3.5 per cent over the year to November; consumer prices rose only 0.8 per cent; and broad money grew just 4.5 per cent.

In 1998, Japanese real domestic demand contracted by over 3 per cent. Given the tightening in monetary conditions that has occurred, as both the yen and long-term interest rates have soared, there is a strong chance that demand and output will contract sharply this year, as well.

Two questions arise. First, why should the Japanese authorities have tolerated the rise in the yen? Second, what are the implications for the world economy, above all the US?

One justification for the Japanese inaction, until yesterday, is that the strong yen helps Japanese banks meet internationally mandated capital adequacy ratios. It does so by raising the value of yen-denominated bank capital against foreign-currency assets. This argument is not convincing, however, since the higher exchange rate is likely to impair the quality of yen-denominated assets.

Another excuse might be that the strong yen raises Japanese real incomes, via the improvement in the terms of trade, and these higher incomes will then lead to greater spending. But this ignores the depressing effects on real incomes of the squeeze on profits in companies producing tradeable goods and services, including those sold on the domestic market.

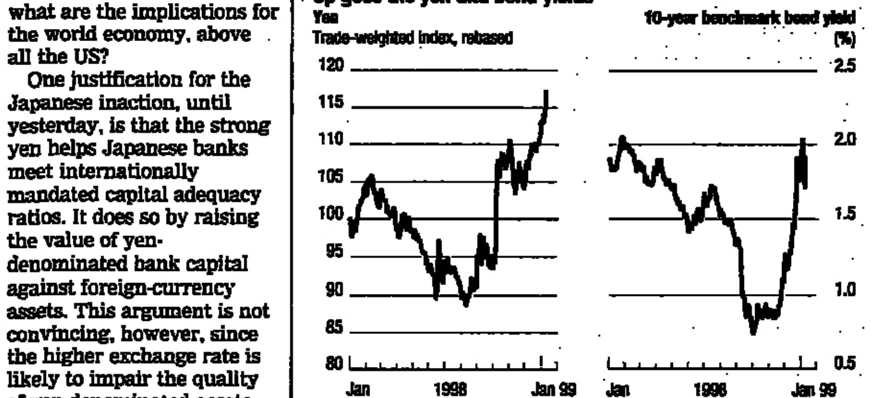
A third justification might be a desire to have a deep and prolonged recession. Some Japanese seem to believe radical structural reforms will only follow a breakdown of the existing economic, social and political order. If such thinking is behind current policy, the implications are frightening.

A fourth justification, consistent with prime minister Keizo Obuchi's remarks during his tour of European capitals, is that a strong yen helps make the currency more globally important. Many Japanese fear the euro will reduce the yen to an also-ran, but they also see the euro's launch as an opportunity to limit the dollar's dominance. They may even be prepared to sacrifice their economy to such yen diplomacy.

A final possibility is that the tightening in monetary conditions is not deliberate. It is not so much that the authorities want the yen to be strong as that they are unwilling (or unable) to take the measures needed to keep it weak. With a current account surplus of over 3 per cent of gross domestic product, the Japanese must be steady net purchasers of foreign assets if the yen is not to appreciate. Whenever the outflow is disrupted, as it was by the turmoil of late 1998, the authorities must intervene. Inaction then ensures a self-reinforcing appreciation, with Japanese investors postponing foreign investment in the expectation that assets will be still cheaper tomorrow.

Whatever the reason for their complacency, the authorities will not apparently deliver the only policy likely to halt the economic slide: a radical monetary expansion by the Bank of Japan, designed to drive both the yen and long-term interest rates down. This would be the best thing to do. It is not, it appears, about to happen, at least until the slide in output accelerates.

Up goes the yen and bond yields



Source: Datastream/ICV

Given the strong yen and the government's unwillingness to do much to reverse it, further decline in the Japanese economy seems even more likely than a few months ago. This is bad for Japan. But how bad is it for the rest of the world?

Weak Japanese demand is damaging, as are higher Japanese long-term interest rates. But Asian economies have been helped to lower interest rates by the yen's strength, since this tends to strengthen their currencies against the dollar. The most important issue, however, is how yen strength and fragile Japanese demand affect the global locomotive: the US.

Last year US final domestic demand rose some 5 per cent, while private consumption grew almost as quickly. For the rest of the world, the impulse from the US has come via the deterioration in its external balance, with a current account deficit of around \$230bn (2.7 per cent of GDP) last year and a still bigger one likely in 1999.

Behind this extraordinary surge in spending is a private financial deficit running at an unprecedented 4 per cent of GDP. And that, in turn, has been driven by the rise in stock market wealth. Analysis by London-based Phillips & Drew suggests that the high value of stocks has boosted the combined total of consumption and investment spending in the US by around 4 per cent.* In essence, it has allowed the private sector, as a whole, and households, in particular, to raise ratios of debt to income to unprecedented levels, while sustaining net worth at a postwar high.

This US evolution is triply unsustainable. First, the private sector will, in the long term, cease to be a net borrower on this unprecedented scale. Second, as is argued by Jim O'Neill for Goldman Sachs and Tim Congdon for London-based Lombard Street Research, the current account deficit, which is the external counterpart of the private sector deficit, is unsustainable.** Third, the present stock market level cannot endure indefinitely.

What is unsustainable will not last. What makes this point so potent in this case is that if the engine of US dynamism is to continue, the imbalances must become still bigger.

The reason for this, put forward in the paper from Phillips & Drew, is that for the stock market to remain so remarkably buoyant the US economy must expand at least in line with trend. Given both the deteriorating external position and and tight fiscal policy, US private spending must therefore grow faster than real disposable incomes. So private savings must fall further – or rather dis-saving must rise further. If the US private sector is to expand indebtedness, in relation to disposable income, it needs a further big rise in the stock market. Thus the needed spending growth will happen only if the stock-market's bubbling valuations rise.

The danger is that the US marvel will come to an end before demand in the rest of the world picks up. But that is just what the over-strong yen seems to threaten: a weaker dollar makes it more likely that the inflationary pressures that are now hidden within the economy – in the rapid growth of broad money, the low rate of unemployment and rising wages – will emerge before demand is on a firmly expansionary course elsewhere.

A stronger yen that does not reflect a robust Japanese economy, but rather private unwillingness to put more money into US assets, is precisely what the world does not now need. The Japanese authorities were right to intervene. For their own sake – and for that of the world – they need to intervene far more aggressively in the weeks ahead.

**America and the World Economy, Bill Martin and Wynne Godley, Phillips & Drew, December 1998;*
***US Balance of Payments – Unsustainable, Jim O'Neill, Goldman Sachs, January 1999; Totally Unsustainable, Tim Congdon, Lombard Street Research, December 1998.*

Martin.Wolf@ft.com

LETTERS TO THE EDITOR

IFAA supports government timetable for pension mis-selling compensation

From Lord Chelmsford.

Sir, I refer to the article on the pensions mis-selling review in your Saturday edition ("Legal threat to mis-selling review recedes", January 2).

I trust you will allow your readers to learn how the IFA Association, and only the IFA Association, has campaigned to separate claims against our members for negligence from claims relating to economic loss.

At no time has the IFA Association made any attempt to avoid claims made against its members which arise out of negligence.

Indeed, where negligence exists, it has done everything that it can to support the government's timetable for compensation.

Indeed our support extends to claims arising out of negligence in both Phase 1 and Phase 2 of the government programme.

The one area where we have always differed from the regulator and government concerns economic loss. All pensions are based on certain actuarial assumptions.

These are advised to the holders as is the presumption that over the period of contributions, the ebb and flow of stock market performance, rates of interest and annuity rates at retirement will allow the final result to be crudely accurate.

Today, bond yields are low with the resultant effect that current annuity rates are the lowest in living memory.

This was not the situation when the majority of cases now to be reviewed under Phase 2 were taken out.

In effect the regulator, backed by the government, is demanding that financial advisers should underwrite the risk of loss caused by conditions completely outside their control.

We do not see this as a liability to the IFA and have said so forcefully. In any case, who knows how the economy will be when individual pension payments start? For Phase 2 cases in the main, this will be as much as 25 to 30 years hence.

The holder may then do much better than expected. Any mid-term position seems to us to be irrelevant to the government's mis-selling campaign – a campaign which we support.

Finally, contrary to the implication of your article, the IFA Association is both caring of its members and growing year on year. We now represent 2,700 firms which is over 50 per cent of the market.

Lord Chelmsford,
president
IFA Association
41/43 Praed Street,
London
W2 1NR

MEPs to step aside at polls

From Mr James Moorhouse MEP.

Sir, With regard to the European parliament's censure motion against the European Commission, ("Schröder backs Commission", January 12) I would like to emphasise that this is not motivated by the desire of MEPs to raise their profile before the European elections. A great many MEPs, such as myself, are standing down, and we feel equally strongly that the Commission should be censured in some way.

James Moorhouse,
Lib Dem, London South & Surrey East,
1 Dean Farrar Street,
Westminster,
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Wall Street sheds risk to avoid hedging it

From Ms Inge Kaul.

Sir, The Lex column of the Financial Times of January 8 applauds Wall Street for having done "a good job in managing risk" and "turned in a record profit for 1998".

The column argues that several factors helped: mergers and acquisitions; controlling compensation costs; and a more resilient business mix.

The argument skips the important point: shedding the costs of financial crisis – to borrower countries and within them to the poorest.

You will no doubt recall that only a few months ago the pages of the Financial Times were overflowing with outcries over 20m people being pushed into poverty in Indonesia and other social ill-effects of the Asian financial crisis.

It thus seems that international bail-out packages allowed Wall Street to get away "without a hair-cut", while others lost their last shirt.

Thus, Wall Street excels in shedding – not just in hedging risk.

Inge Kaul,
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We are keen to encourage letters from readers worldwide. Letters may be faxed to +44 171-873 5938 (set fax to "fine"). e.mail: letters.editor@ft.com Published letters are also available on the FT web site, http://www.FT.com Translation may be available for letters written in the main international languages. Fax +44 171-873 5938. Letters should be typed and not hand written.

Countdown to euro

The UK government is working on the practicalities of joining Emu, but there is disagreement about how quick the transition should be, says **Kevin Brown**

Less than two weeks after the launch of the euro, pressure is growing on the UK government to announce a target date for joining Europe in economic and monetary union.

The Confederation of British Industry and the British Chambers of Commerce, the two biggest business organisations, are urging Tony Blair, the prime minister, to end uncertainty about Britain's intentions. The government says it will only join when the economic conditions are right. But much of business wants a firmer timetable. A Mori poll of City companies this week found 50 per cent support for UK membership by 2001, and 80 per cent backing for membership during the next parliament, which must begin by 2002 at the latest.

Of course, there are also powerful contrary voices. The Institute of Directors is firmly opposed to early membership, and the Business for Sterling lobby group has mobilised heavyweight figures in defence of the pound. Nevertheless, in private, cabinet ministers think there is a business majority for early UK membership, in sharp contrast to opinion polls showing the consistent – and growing – hostility of the population at large.

The government has been reluctant to spell out its intentions for fear of handing a powerful political weapon to the Conservatives. Nevertheless, substantial work is being done behind the scenes on the practicalities if Britain decides to join.

From the business perspective, the most important debate is going on in a series of committees and working parties drawing up a National Changeover Plan. This will provide the crucial template for the replacement of the pound by the euro, should Mr Blair win a referendum on membership of Emu. It will dictate, for example, whether businesses have years or months to get ready, and whether they will be forced or merely encouraged to display dual prices during the transition.

The plan, which is being drafted by the government's standing committee on Emu, chaired by Gordon Brown, the chancellor, is expected to be completed later this month or early in February. Much of the detailed work is being done by the chancellor's Business Advisory Group, a committee of business, trade union and consumer representatives, and eight working parties which are dealing with retailing, the retail financial sector, general business issues, public authorities, wholesale financial markets, legislation, notes and coins, and information and education.

Three main issues have emerged:

● The timescale. There was a near explosion in one of the committees when Treasury officials suggested that only eight or nine months might elapse between a cabinet decision and a formal locking of exchange rates. One retailing representative is said to have asked whether the Treasury was trying to drive him out of business. The framework set out by the Treasury envisages three months between a government decision on membership and a referendum, a further five months to the locking of exchange rates, and another 25 months for equipment conversion, before notes and coins are introduced. The final stage would be six months of dual pricing, making a total of 39 months.

There was a near explosion when Treasury officials suggested only nine months between a cabinet decision and a locking of exchange rates

The central debate, and the one which has most occupied the retail working party, is whether the period between the referendum and the introduction of notes and coins could be lengthened from 30 months to 36. Retailers have argued that 30 months is not enough for big companies, which will each have to spend £50m or more to install new systems and train staff.

The retail financial sector working party has been discussing a more radical option – allowing three years between a firm decision to enter and the locking of exchange rates, followed by a further 12-15 months before the introduction of notes and coins. This gives a maximum timetable of more than four years.

The argument being put by some bankers is that the growth of demand for euro accounts will be faster in the UK than in the first-wave countries because people will be familiar with the new currency. They say this could put great strains on the payments system. However, other bankers argue that a long transition period is unnecessary. The social security department and other public sector organisations are also thought to be uneasy about the timetable, for the opposite reason. They are thought to be uneasy about a short transition, in part because of their poor record of managing technological change.

People on the working parties say that the Treasury is signalling a degree of flexibility about the timetable. "With the best will in the world, they realise that it just cannot be done as quickly as they want," said one participant. However, a senior businessman close to the discussions said Treasury officials think retailers and bankers should be able to complete the process more quickly than the 36-42 months planned in continental European countries. Some will have done it in euro-zone subsidiaries, and problems with equipment such as tills and automatic teller machines will already have been ironed out, he said.

"The Treasury judgment is that you can squeeze the period between formal membership and introduction of notes and coins to 25 months, but not further," he said. One compromise under discussion is to shorten the final period of dual pricing from six months to two.

● Dual pricing. Retailers want a voluntary code of practice to prevent abuses, rather than legislation. Consumers' representatives have said they may be willing to go along with a code because of the complexity of drafting legislation to cover everything from corner shops to personal pensions. However, they want strong legal backing, which would require some legislation. No decision has yet been made.

● The exchange rate. Winning the referendum would be easier if the government were to announce the conversion rate for the euro in advance. Business is likely to be in favour of joining at a rate of €1.30 to the pound but would be worried about competitiveness if the rate were set at, say €1.45. The current rate is €1.42. This is likely to require complex negotiations with the 11 members of the euro-zone and the European Central Bank, which may not be completed before a referendum is held.

Business supporters of the euro say the best hope is that sterling over the next few years is both competitive and stable. Volatility might make the economic case for membership stronger, but it might also frighten cautious voters.

People on the working groups say there are signs that the plan may be fairly vague when it finally appears, probably next month, in part because of the sensitivity attached to anything that looks like a blueprint for Emu.

However, many also say they expect the pressure for firm planning – and a target date for membership – to grow quickly now that the euro is a reality. Far from being just another foreign currency, as some of the opponents of early UK membership describe it, there are signs that the euro is already being used within UK businesses, as big companies encourage smaller ones to invoice in euros as a way of limiting their currency risks. Presentation, enthusiasts say, may become irrelevant if the euro sweeps through British industry as quickly as many senior business people think it will.

FINANCIAL TIMES

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Big Tobacco on the loose

British American Tobacco's *proposed* £5bn ($8.2bn) takeover of Rothmans has been a hit with investors. BAT's shares were up sharply yesterday for the second day running. But there are some qualms, or there should be.

The deal furthers BAT's chief ambition – shared by Philip Morris, its fellow duopolist in global tobacco – *of exploiting growing* markets in the developing world. Tobacco is a morally dubious business at the best of times. Is not targeting the world's poor more dubious again?

This is not to subscribe to the naive belief – still quite widely held – that Big Tobacco is out to seduce the world's innocents into western vices. Tobacco is long established as a universal drug. In many developing countries, the main thing stopping people from smoking more – or switching from nasty local tobacco to the higher-quality western version – is that they cannot yet afford it.

Much the biggest prize in the world tobacco market is China, which consumes a third of the world's cigarettes and is almost wholly supplied by the Chinese state monopoly. China used to be BAT's most profitable market, until its dozen-odd factories there were expropriated in the 1949 revolution. Should the company establish itself in the Chinese market, it would merely be recovering ground lost more than two generations ago.

But one must not be naive in the other direction either. One former chairman of BAT had as his first post that of marketing manager for the company's Ethiopian monopoly. Plainly, his job was not to beat off the non-existent competition: it was to increase Ethiopian consumption *of cigarettes*.

In the developed world, there are two chief apologies for the tobacco trade. The first is that consumption is falling, or at worst static: the second, that consumers have been fully educated on the risks. In the developing world, neither necessarily applies.

This is not to say that western governments should intervene. It would help if the governments in the EU and US kicked their insidious habit of subsidising domestic tobacco production as a means of catching votes. But to hinder exports would be to patronise the *developing* world's consumers, to say nothing of its governments.

The question is rather one for individuals. If people choose to invest in tobacco companies, or to work for them, that is their own responsibility. They might care to reflect, however, that profiting from sales to developed countries is questionable enough. Specialising in the third world is that little bit more doubtful again.

State of union

US voters re-elected Bill Clinton as president in 1996, and show no sign of wanting him removed from office. They have every right to expect him to deliver his state of union address, on schedule, next Tuesday. This would be a welcome signal that, despite Mr Clinton's trial in the Senate, the president and the House of Representatives are getting on with the work of government.

The state of the union address allows the president to speak to Congress and the public, and to lay out the White House agenda for the coming year. In past addresses, Mr Clinton has excelled – even last January, just days after Monica Lewinsky first became a household name. A number of congressmen, senators and pundits say that he should forgo the chance to do so again.

Some are motivated by dislike for Mr Clinton, some by the chance for partisan advantage, and some by a genuine belief that an impeached president does not deserve to give the address. Some *think Mr Clinton* should delay it until after the trial, and some that he should cancel it altogether. All are wrong-headed.

Mr Clinton has been impeached by the House of Representatives. There must now be a trial in the Senate. This is not an illegitimate process, nor a needless distraction from the business of government. It is what the constitution demands. In the process, however, Washington must not become a policy-free zone.

The founding fathers constructed a balance to prevent Congress from unseating a president and overturning the will of the people on a partisan whim. It is for the Senate to judge the president. Despite his reckless and dissembling behaviour, Mr Clinton remains innocent of high crimes and misdemeanours unless the Senate chooses to convict him by a two-thirds majority. The trial should be concluded as quickly as fairness allows. Until then, Mr Clinton must continue with his elected duties.

On Tuesday, he should set aside political embarrassment, and lay out his priorities for the nation. This will show the US public and the watching world that the business of government can continue at the same time as the trial. More important, there is much work to be done. The world remains a dangerous place. It is high time Mr Clinton and Congress sorted out the US trade agenda. At home, Social Security and Medicare are concerns.

Dennis Hastert, the new speaker of the House, has pledged that the Republican majority will now concentrate on legislation. This is a welcome development. The last Congress achieved virtually nothing of note – except the first impeachment since 1868. With the Senate preoccupied, Mr Hastert and his colleagues in the House must set out the Republican agenda. But first, on Tuesday, they must listen to Mr Clinton.

Africa at war

Sierra Leone's descent into anarchy is more than yet another tragedy on a battle-scarred continent. It marks the failure of a vital African-led peacekeeping initiative, and threatens the transition to democracy in Nigeria. If Africa cannot keep its own house in order, and outsiders can do no better – *as the collapse of* the UN-supervised peace plan for Angola suggests – prospects for the region seem bleak indeed.

It is nearly a year since the west African peace force known as Ecomog launched its onslaught on the Sierra Leone capital of Freetown, paving the way *for the return of* the democratically elected government of President Ahmed Tejan Kabbah.

They won the capital, but have lost the country. Ecomog's military campaign lacked a political strategy with which to secure a settlement with the rebels, while the government appealed in vain to the international community to help provide the resources to rebuild a collapsed state.

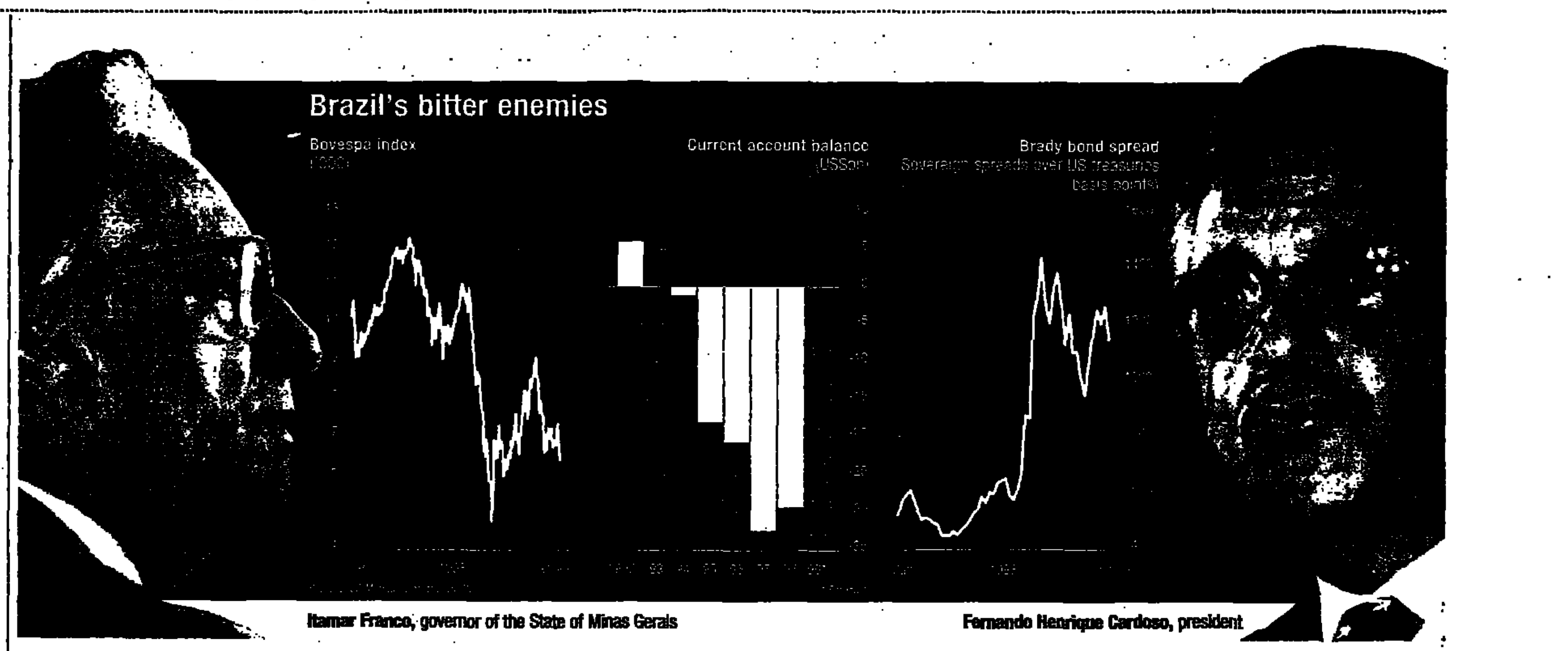
For Nigeria, whose 15,000 troops make up most of the force, the outcome has been humiliating and dangerous. Prices for oil, the country's main export, are the lowest for 12 years. To make matters worse, protestors in the oil-producing Delta region who are demanding a higher share of government spending have managed to cut production by a third.

Nigeria's military leader, Gen Abdulsalami Abubakar has hinted that troops may be deployed in the Delta. But an army fighting on two fronts and an economy in crisis are not conducive to a stable transition or a secure democracy.

Instability in Nigeria would be a devastating blow to a continent already beset by conflict. The war in the Congo, formerly Zaire, has sucked in troops from at least six other countries. Sudan's civil war shows no sign of ending, Eritrea and Ethiopia remain on the brink of resuming their futile border battle, while Somalia has been all but abandoned to its fate.

It need not be so, as Mozambique and Namibia have shown. In both countries substantial UN monitoring *forces* presided over the end of civil war and the holding of multi-party elections. But the key to success was the quality of the diplomacy, and the willingness of the US and the UN to focus attention on what had seemed intractable problems.

Since then Africa has slipped down the international agenda, but the collapse of Sierra Leone is a further warning that its need for assistance is greater than ever. It would be disastrous if it *takes the collapse of Nigeria's* transition before the mind of the international community is concentrated on a continent slipping into war.



Itamar Franco, governor of the State of Minas Gerais

Fernando Henrique Cardoso, president

Brazil's tough year

The president's austerity plan is under attack from an unlikely quarter – a tempestuous state governor who was once Mr Cardoso's boss, say **Geoff Dyer** and **Stephen Fidler**

When Fernando Henrique Cardoso began his second term as Brazil's *president* on New Year's day, he knew he was in for a rough ride. Ahead of him lay difficult talks with Congress on a yawning fiscal deficit. With the economy sliding into recession, he was braced for protests from trade unions and industrialists. He had promises to fulfil to the Interna*tional Monetary Fund, and he* knew investors would be poised like hawks over his every move.

What Mr Cardoso could not have foreseen was trouble from an old boss and purported political ally. Five years ago, Itamar Franco was president of Brazil and Mr Cardoso was his finance minister. Appointing Mr Cardoso, architect of the Real plan which stabilised Brazil's currency and defeated inflation, was perhaps *the only notable decision of Mr* Franco's presidency.

Mr Franco is a tempestuous man. In his two and a half years as president, he went through six finance ministers. Mr Cardoso was his fourth. He publicly rebuked one minister after finding out, from his maid, that gas prices had gone up.

So it was not entirely out of character for Mr Franco to declare, in his first week as governor *of Minas Gerais*, a 90-day moratorium on the state's R$18.5bn (£9.3bn) debt with the federal government.

Brazilians are still debating whether the impulsive Mr Franco really thought through the consequences for Mr Cardoso, and for the country as a whole, of halting payment on the state's debts.

Mr Franco claims the state's coffers are empty. Tax revenues have dwindled as Minas Gerais, a wealthy, *industrial state, has* been hard-hit by the economic downturn. Mr Franco claims that if he were to honour the monthly interest payments of R$80m on the state's debt, there would be no money to buy food for prisons or to pay the salaries of some civil servants.

The government says this is nonsense. The debts of Minas Gerais were restructured over the past two years, and bear an *interest rate of between 6 and 7.5* per cent, well below market interest rates of 30 per cent.

What is perhaps surprising is the near-panic the Minas Gerais moratorium has provoked among investors. Brazilian shares, which were 7.65 per cent lower early yesterday afternoon, have fallen 19.2 per cent since Mr Franco dropped his bombshell last Wednesday.Spreads of some Brazilian bonds have widened to levels not seen since the Russian crisis.

Brazilian markets often react in an exaggerated fashion to bad news. The *Minas crisis* might blow over in a few days.

However, the moratorium has exposed real concerns about Brazil. It has underlined the extent of the political and economic obstacles facing Mr Cardoso as he tries to guide his country away from a prolonged economic crisis.

"It is not just the Minas situation that is making investors nervous, it is the cumulative effect *of all the political problems*," said Francis Freisinger, economist at Merrill Lynch in New York.

Brazil, which is nursing a budget deficit of over 8 per cent of gross domestic product, has been in the spotlight since it narrowly avoided a forced devaluation of the real in the aftermath of the Russian debt default in August.

However, the real significance of the Minas Gerais stand-off lies in what it says about the state of the economy.

Mr Franco's moratorium is the first major political challenge to Mr Cardoso's austerity strategy following the panic in emerging markets last summer, when Brazil came close to having to devalue the Real.

There are other signs of stress as Brazil moves inexorably towards recession. Some 2,800 workers at a Ford factory in the state of São Paulo turned up for work *this week even though* they had been fired. With unemployment already at a record highs, the once-proud car workers, who form the backbone of Brazil's labour movement, said they would be willing to work for lower wages.

The powerful São Paulo Industrial Federation recently joined forces with the trade unions to plead for lower interest rates.

The economy was already slowing *before the government was* forced in September to raise interest rates to around 40 per cent to defend the currency. Higher interest rates caused industrial output to be 9.2 per cent lower in October 1998, compared with October 1997. Economists are forecasting the economy will contract between 1 and 4 per cent this year, even if the government's austerity plan works.

The brunt of the impact has been felt by the car industry, which is suffering from significant over-capacity after receiving $20bn of *investment* during the last four years. Car sales dropped 21 per cent last year.

Brazilian consumers, who are still adapting to the world of low inflation, have also suffered under the burden of higher interest payments. Defaults on consumer credits are rising. Nor did Christmas bring much relief to the retail sector, with sales down 5.2 per cent compared to the previous year, according to a survey *by the São Paulo federation of* commerce.

Last October, the government narrowly averted a currency crisis through four responses: high interest rates to slow capital flight, the promise of R$28bn of budget cuts this year, long-term fiscal reform, and a $41.5bn package of emergency aid led by the IMF.

However, the measures have so far not restored the government's credibility. Foreign reserves, the barometer of international confidence, fell by $7bn between November and December. A further $1bn has left the country so far this month.

"The Minas problem comes at a time when the government's credibility was already being questioned," says Dany Rappaport, chief economist at Santander Investment in São Paulo.

Even before the Minas moratorium, *Mr Cardoso* knew *that* without rapid progress on the fiscal front, capital flight would not abate, high real interest rates would continue to stifle the economy, and the IMF might withdraw its support. Now, as he tries to muster support for his fiscal plans, he faces a new and potentially dangerous political headache.

The last thing Mr Cardoso wants is to renegotiate the debts *of Brazil's 27 states – again. Over* the past two years, the federal government had already refinanced debts 24 states totalling R$86bn, or around 10 per cent of GDP.

If the government were to offer more favourable repayment terms to Minas Gerais, it would have to do the same for everyone else. This would endanger the budget deficit targets agreed with the IMF. Investors would see any capitulation to Brazil's profligate states as a serious blow to the credibility of Mr Cardoso's austerity efforts.

So far, the government *is* acting tough, blocking R$11.7m of fiscal revenues that were due to be transferred to Minas Gerais.

But the dispute with *Mr* Franco has come at a time when the government's fiscal austerity plans were already at a delicate stage in Congress. Government managers had been hoping to use a special session over the January recess to make up for lost time.

Although 70 per cent of the R$28bn package has already been approved, the government has suffered a number of reverses in the last two months. The lower house delivered a serious blow to Mr Cardoso in December when it rejected a proposal to increase civil servants' pension contributions, an area that the government had highlighted as one of the principal causes of the fiscal deficit. Ministers say the reforms will be *sent* back to Congress in February.

The government is also battling against time to approve an increase in a financial transactions tax, a key part of the government's revenue raising efforts, which has already been delayed. If the measure is not passed by March, ministers will be forced to find new savings or miss their fiscal targets.

The danger of taking a tough line with *Minas Gerais is that* Mr Cardoso risks losing support for his reforms in Congress. Mr Franco's party, the Brazilian Democratic *Movement* (PMDB), is one of the three most important parties in Congress, but also the most fickle member of the five-party coalition supporting Mr Cardoso's government.

An early test of the Franco effect will come today, when a special session of the lower house *is due to vote on a new set of tax* increases to make up for the delay in approving the financial transactions tax. The leaders of the PMDB have so far declared their support for the government and political analysts believe the measures will pass comfortably.

A stand-off between federal and state governments could have a lasting impact on Brazil's fiscal plans. The R$28bn cuts to this year's budget are supposed to be only the starting point in Brazil's fiscal adjustment – an exercise in buying time while more permanent reforms are implemented.

These reforms include a comprehensive shake-up of the the country's byzantine tax structure, which will not be passed *without the co-operation of state* governors. In addition, the government wants to reduce the tax revenues which are passed on to the states. "There will be a war in Congress over this," said Carlos Lopes, a political analyst in Brasilia.

From the point of view of for*eign banks, the timing of the Mr* Franco's moratorium could not have been worse. Having sharply scaled back their exposure to Brazil in the second half of last year, banks had been contemplating since the start of the year whether to increase loans again. Economists believe the Minas Gerais fiasco could also delay the return of many Brazilian borrowers to international capital markets.

The developments in Minas have also caused concern in Washington, where the IMF and the Treasury appear to be adopting a "wait-and-cross-your-fingers" approach. Officials in Washington have known there would be difficulties in the implementation of the austerity programme.

The IMF has received assurances from Brasilia that the dispute with Minas will not affect the programme. Officials still expect the second tranche of funding to be released after a review in February of Brazil's fiscal accounts. However the more obstacles Brazilian politicians throw at Mr Cardoso, the more nervous Brazil's international sponsors are likely to become.

The president has to find a way to restore the confidence of foreign investors that would in turn allow funds to return to Brazil *and interest rates to fall. If he* fails, the pressures on his austerity strategy will grow. Eventually they will become unbearable.

OBSERVER

Time for Teletubbies

It's 30 years since John, Paul, George and Ringo took North America by storm. Now another Fab Foursome are following the trail to global fame: no, it's not the sparky Spice Girls but the Teletubbies, those monosyllabic roly-polies who are such a hit with the under-5s.

Tinky Winky, Dipsy, Laa Laa and the other one are going down like soda-pop with US youngsters. *Investors in* Handleman, the US company that holds 75 per cent of Itsy-Bitsy Entertainment, which in turn owns the North American rights to the Teletubbies, are also getting excited.

The result is that Handleman *chief executive Stephen Strome has seen his share price leap* as Wall Street has woken up to the "eh-oh" phenomenon. There's talk of $2bn sales of Teletubbies merchandise this year and Handleman is singled out by this month's Individual Investor, an American glossy for private punters, as one of its "magic 25" stocks to watch; others include corporate giants such as Merrill Lynch and Time Warner. Who says you can't have your tubby toast and eat it?

Paper chase

And another one bites the dust. There may be no "black hole" at Anglo-French paper-maker Arjo Wiggins Appleton but why does the company keep wiping the pad clean when it comes to executives?

Must be something to do with that famous clash of cultures that's seen off most attempts to create corporate *entente cordiale* across the channel. Never mind the gaping chasm in approach to corporate governance, it's just that the Brits know better than the French, and vice-versa.

It's less than two years since Philippe Beylier, a paper *merchant rather than a paper* maker, took the chief executive's chair from Alain Soulas, who'd left suddenly a year earlier with a £1m-plus severance package. Before him, there was Stephen Walls who left after the board blocked his own growth strategy. Beylier's elevation, announced *before the departure of* combative chairman Cob Stenham, saw lots of fancy talk about a more aggressive, strategically-minded approach to management. As for giving the group a new direction, the reality is that things have since more or less stood still.

Now Beylier is on his way with a pay-off as part of one of those reorganisations that means there's no need for a chief executive. Ken Minton – who left a mixed legacy behind him as chief executive of Laporte – becomes executive chairman. So it falls to Minton, 62 on Sunday, to run in his new multi-national management and to attempt to reconcile the various needs of the *mixed* bag of Arjo Wiggins investors on both sides of the Channel. If precedent is anything to go by, he *might* not have long to make it work.

Mind your backs

European commissioner and one-time leader of Britain's Labour party Neil Kinnock has a date in London tomorrow. But the corruption row in Brussels means he won't be keeping it.

The event in question is the 10th anniversary of the formation of the left-of-centre Institute for Public Policy Research, one of the many thinktanks spawned in recent years in the UK.

When it was set up, Kinnock was vowing to win the next general election outright – he *didn't – starting a doomed drive* to recruit 1m party members and trying to find a defence policy that frightened the enemy more than the British public.

Transport commissioner Kinnock was due to join in this week's celebrations, speaking on "the main challenges facing the EU in the next decade" – and whether the UK will be sidelined if it stays outside the single currency. But he's had to cancel at the last moment. With the European parliament threatening to *maul* commissioners on the same day, following accusations of widespread corruption, Kinnock has decided it would be best to stay in Brussels for a while to watch his own back. Some things never change.

What a treasure

He's been attacked from all sides *and abandoned by traditional* allies. But Israeli prime minister Benjamin Netanyahu seems to have found a friend and ally in his finance minister.

Until this week, Netanyahu has had no problems with slashing the state budget. But things seems to have loosened up *ahead of the national elections in* May; so much so that he's encountered no opposition from his treasury in launching a spending spree.

After pushing through a bill giving free education for pre-schoolers, Netanyahu was asked if his excellent relationship *with his finance minister* had made the initiative easy. "Look, I must tell you," he said, "We really see eye to eye." Not surprising, really. Since Yaakov *Neeman* resigned as finance minister, Netanyahu has been doing the job himself.

Net effect

Which reminds Observer of a rumour doing the rounds, to the effect that the British Broadcasting Corporation, Netscape and Yahoo are in merger talks. They've already agreed the name – BB Net'n'Yahoo.

The Financial Times

100 years ago

The Odds Of War
Following on the Hispano-American war we saw many paragraphs about the mortality on the winning side, meant to show that, as a whole, the expedition had been nearly as favourable to life as an excursion arranged by Thomas Cook. It is not wholesome that we should under-estimate the *cost of war, and a recent* calculation by the New York Life Office deserves to be considered. Taking the Federal side in the American Civil War, it is shown that every man of 25 who enlisted had a greater chance of death over three years than a man of 68 who *pursued his ordinary work at* home.

50 years ago

Bandits In Malaya
Singapore, Jan. 12. Eight months after the emergency started in Malaya with the *murder of three European* planters, significant facts emerge. First, the problem of ridding the country of terrorists is proving much bigger and more complicated than was at first imagined. Second, the Communist attempt to disrupt production of tin and rubber has proved singularly unsuccessful.

FINANCIAL TIMES
WEDNESDAY JANUARY 13 1999

THE LEX COLUMN

Bank statement

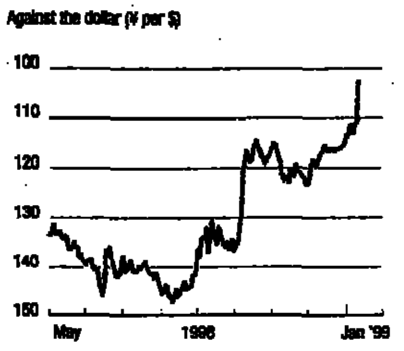
As lines in the sand go, the Bank of Japan's intervention to halt the yen's appreciation was significant. But how long will it be before it gets washed away? The success rate of previous interventions does not leave much room for optimism.

True, last summer's intervention – to strengthen the yen – was effective. But that was different. The US was sufficiently rattled by the risk of a Chinese devaluation to step in to the markets alongside the BoJ. Such co-ordinated action this time round is hampered by other factors weighing down on the dollar – such as investor concern over Brazil and the US trade deficit.

The credibility of the BoJ's move also depends on what happens on its home turf. Although the weakness of the Japanese economy should, longer-term, lead to currency weakness, short-term factors are conspiring to keep the yen strong. Fear is one. Japanese companies or individuals, stung by the recent currency appreciation, may still feel the need to hedge against further appreciation by buying yen assets. The recent jump in bond yields is another incentive to preferring Japanese over US or European assets. And the markets know the Japanese government can do little to underpin the BoJ's move: further monetary loosening is tricky when short-term interest rates are already near zero.

The BoJ may therefore have to follow yesterday's move with more of the same. Even that will not, in itself, be enough to give Japanese exporters the sustained yen weakness they want. But it may at least help contain sharp and damaging currency swings. A case of being thankful for small mercies.

Yen
Against the dollar (¥ per $)



Source: Datastream/ICV

Internet stocks

Rupert Murdoch thinks that internet stocks are overhyped. Well, thank heavens for that! The News Corporation chairman's comments helped deflate some web company share prices yesterday – Amazon.com is now up by a mere 50 per cent in a week. Imagine where it might be if Mr Murdoch had spotted value in the sector.

Unfortunately, Mr Murdoch's verdict is of little practical help to those investors who have so far missed out on the online boom. By all rational yardsticks the current crop of quoted online companies has long been hugely overpriced. On the other hand, there are few alternatives to tapping into the potential of the worldwide web. Those companies that are building strong brands or superior customer service may well go on to become hugely profitable. But current valuations make sense only if everyone in the industry turns out to be a winner, which is a logical impossibility. The internet bubble will burst and now is not the time to try to play these stocks.

Of greater use is Mr Murdoch's prediction that the internet will destroy traditional companies as it subsumes their business. Morgan Stanley will hardly be quaking in its boots because internet broker E*Trade is starting up a low-cost online investment bank. But thinner underwriting margins are sure to follow. Investors should at least make sure that their traditional investments are getting wise to the web.

Tractebel

Now is not the best time, politically, for Suez Lyonnaise des Eaux to have to make another move in Belgium. The leading Bel 20 index has lost half a dozen constituents in the past year, mainly through takeovers by French companies. For Suez Lyonnaise to increase its grip not only on Tractebel, the international energy group, but on the domestic monopoly Electrabel would be particularly sensitive in the run-up to Belgian elections in June. However, it may have to.

The issue is Tractebel's desire to merge with Electrabel (market value €22bn) in which it already has a near 40 per cent stake. This makes sense. Investors in both Tractebel and Electrabel would be best served if the two co-operated outside the country and rationalised their efforts inside it. The sticking point is that such a merger would dilute Suez Lyonnaise to only about 30 per cent of the enlarged group.

Suez Lyonnaise will either have to support Tractebel's merger with Electrabel – but buy sufficient equity in the merged group to keep its stake above 50 per cent – or risk snubbing Philippe Bodson, Tractebel's head. This may prompt his resignation, which would be bad news for Tractebel shares.

Arjo Wiggins Appleton

Arjo's shareholders can be forgiven for treating its promise to turn over a new leaf with some cynicism. Since BAT's former British and American papermakers merged with Arjomari of France in 1991, repeated promises of reform to reverse the sliding share price have not been worth the paper they were written on. The plan of Ken Minton, chairman, to regroup Arjo into three autonomous units is partly an admission that the original companies were never properly integrated, and partly an attempt to smooth the path of anyone trying to buy part of the business. There will be cost savings too, but as the company has not yet estimated these it appears they were not the rationale.

The restructuring leaves Arjo with the challenge of putting together two diverse carbonless and thermal paper businesses on opposite sides of the Atlantic, with a declining market and no obvious trade buyer. Mr Minton might do better to recapitalise the division, by forming a joint venture with a financial partner attracted by its strong cashflow. The spin-off of the merchanting division, which now looks likely, may not have been possible under Philippe Beylier, who ran merchanting before moving into the chief executive's revolving chair two years ago. That does not mean that the group can do without a chief executive. Arjo still has much to do to make this proposal work in practice rather than just on paper.

China plans to lead way by issuing bonds in euros

Argentina and Philippines set to follow emerging market first

By Khozem Merchant

China is heading a trio of emerging market borrowers planning to launch bonds denominated in the new euro currency. The bonds would be the first in the euro by sovereign borrowers from emerging markets since its creation this month.

Bankers say Argentina is close to a final decision on a euro issue while the Philippines is to market a eurobond early next month.

But the timing of the issues is likely to be set back by continuing uncertainty in emerging markets following the decision last week by the state of Mina Gerais in Brazil to suspend interest payments on local debts totalling R$18.5bn ($15.3bn).

The moratorium unnerved markets at a time when Brazil was trying to overcome domestic opposition to a stringent, IMF-designed austerity package. The spread on the J P Morgan emerging market index has widened by about 200 basis points in the past five days.

"There is a queue forming for emerging market debt issuance but Brazil has caused the illiquidity and volatility of the last quarter of 1998 to come back," said one economist.

Economists say the appetite for euro-denominated issuance by emerging market sovereigns will rise despite the Brazil setback. "There is no question that the euro will be established as the second preference for Latin American and Asian borrowers," said Stuart Parkinson, senior economist at Deutsche Bank.

Since last November Argentina, China and the Philippines have tapped the dollar markets, reopening a sector effectively shut off to emerging market borrowers since the Russian debt default in August.

Argentina has led the way with a $1bn bond in November. A euro-denominated issue is likely to be of a similar volume. China launched a $1bn bond last December, its first dollar bond since an unsuccessful bid in October 1997. The Philippines also launched a $1bn bond last week.

Earlier this week Edgardo Espiritu, the Philippines' finance minister, said he was adding Goldman Sachs to co-lead manage the proposed euro-issue, along with Warburg Dillon Read and J P Morgan, which were awarded the mandate last August. China is thought to have awarded its euro issue mandate jointly to Merrill Lynch and Paribas.

Chinese officials have indicated their desire to add the euro to their portfolios as a counterweight to the dollar. The State Development Bank, China's main policy bank and lender for domestic infrastructure, recently said it would issue bonds denominated in euros if the opportunity presented itself.

This was a reference to the high spreads over US treasuries, which has made borrowing on the international capital markets prohibitive for China and other emerging market borrowers. "There is an investor perception that now is the time to get into the better quality Asian stories or credits which have turned the corner," said a banker in Hong Kong.

Bonds, Page 20

US warns Japan to cut back on steel exports or face retaliation

By Deborah McGregor in Washington and Kevin Brown in London

The US bluntly warned Japan yesterday to cut steel exports quickly or face retaliatory action, as tensions between Washington and Tokyo moved to the centre of an escalating global dispute.

Charlene Barshefsky, the US trade representative, offered a sharply worded assessment of deteriorating Japanese-US relations after meeting Kaoru Yosano, the Japanese minister of international trade and industry.

"It is no secret that trade tensions between the United States and Japan are increasing quite dramatically," Ms Barshefsky said. "Steel is perhaps the most visible element of that."

This reflects increasing US concern about global dislocation in steel trading following the virtual collapse of Asian markets in the wake of the region's economic crisis.

South Korea's Pohang Iron Steel (Posco), the world's second largest steelmaker, said on Monday that it would cut exports by more than 5 per cent this year to avoid conflicts with the US. Dongkuk Steel, another big Korean producer, said it was also considering cuts.

The US has also had sharp exchanges with the European Union, which Washington believes is not soaking up enough Asian exports. The EU last week opened an investigation into alleged dumping by six Asian and east European countries.

However, Washington's war of words with Tokyo reflects the US administration's strong feeling that Japan has been the single largest contributor to the current pressures facing the US steel industry, where 10,000 jobs have been lost.

US officials claim that Japan alone accounts for almost half of the entire US import surge. In the first nine months of last year, Japanese steel imports rose more than 400 per cent.

The US steel industry has filed three anti-dumping cases against Japan, Russia and Brazil, demanding that the Clinton administration impose penalties of up to 200 per cent on certain types of imported steel. In a report to Congress last week, the government promised that the cases would be dealt with quickly.

Ms Barshefsky made clear that the administration was prepared to take further action if Japan's steel shipments did not fall. "We will, and the president is very clear about this, self-initiate trade cases against Japan if Japan's exports to the United States do not fall significantly and quickly," she said.

It was unclear exactly what form such action would take, although industry analysts suggested the US could extend anti-dumping charges to previously untargeted types of steel.

The administration could also initiate unfair trade practices investigations under Section 301 of the US trade law, aimed at Japan's steel industry.

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Greek defence minister Akis Tsochatzopoulos, centre, opens a meeting of Balkan ministers in Italy yesterday. Peacekeeping agreement, Page 2

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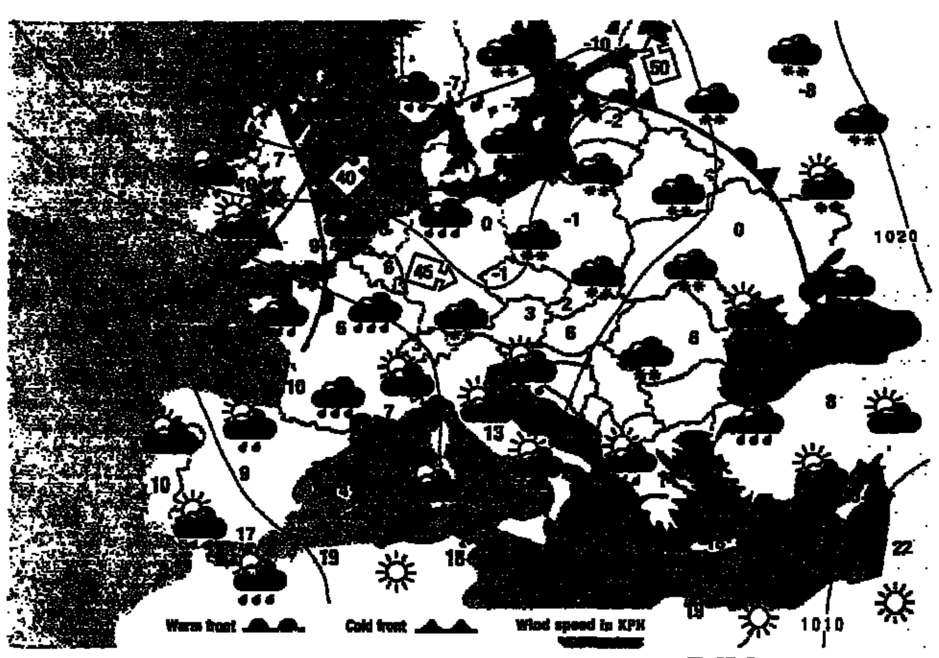
FT WEATHER GUIDE

Europe today

Scandinavia and eastern Europe will have widespread snow showers. The Low Countries and Germany will have rain and sleet during the afternoon. Austria and Switzerland will have sleet and snow showers. Northern France will be wet, but the south will be dry with sunny spells. Spain and Portugal will be mainly dry, apart from showers along the north coast. The Mediterranean will be mainly dry and sunny. There may be occasional showers in northern Italy and along the Greek Ionian coast.

Five-day forecast

Rain will move in from the west across northern Europe, bringing more snow to Scandinavia, eastern Germany and Poland. Mainly fine conditions in the Mediterranean will break down as showers developing over Italy on Thursday move to the eastern Mediterranean by the end of the week.



Situation at midday. Temperatures maximum for day. Forecasts by PA WEATHERCENTRE

TODAY'S TEMPERATURES

		Maximum Celsius
Abu Dhabi	Sun	25
Accra	Fair	32
Algiers	Shower	19
Amsterdam	Cloudy	6
Athens	Fair	14
Atlanta	Rain	18
B. Aires	Sun	27
B.ham	Rain	6
Bangkok	Fair	32
Barcelona	Sun	11
Beijing	Sun	-3
Belfast	Shower	7
Belgrade	Thunder	7
Berlin	Snow	0
Bermuda	Shower	22
Bogota	Shower	19
Bombay	Sun	32
Brussels	Cloudy	6
Budapest	Rain	6
C.hagen	Fair	-1
Cairo	Sun	21
Caracas	Sun	30
Cardiff	Shower	9
Casablanca	Fair	17
Chicago	Sun	-8
Cologne	Rain	4
Dakar	Sun	24
Dallas	Rain	15
Delhi	Sun	21
Dubai	Sun	27
Dublin	Shower	10
Dubrovnik	Shower	12
Edinburgh	Shower	7
Faro	Sun	14
Frankfurt	Shower	4
Geneva	Sleet	3
Gibraltar	Fair	16
Glasgow	Shower	7
Hamburg	Sleet	2
Helsinki	Snow	-10
Hong Kong	Rain	17
Honolulu	Sun	28
Istanbul	Fair	11
Jakarta	Cloudy	29
Jersey	Rain	11
Johannesburg	Thunder	23
Karachi	Sun	27
Kuwait	Sun	18
L. Angeles	Fair	20
Las Palmas	Shower	18
Lima	Cloudy	26
Lisbon	Fair	10
London	Rain	9
Lux.bourg	Sleet	3
Lyon	Cloudy	3
Madeira	Shower	17
Madrid	Sun	8
Majorca	Sun	14
Malta	Fair	17
Manchester	Drzzl	8
Manila	Thunder	29
Melbourne	Sun	21
Mexico City	Sun	24
Miami	Fair	26
Milan	Fair	5
Montreal	Sun	-16
Moscow	Snow	-8
Munich	Shower	5
Nairobi	Fair	27
Naples	Cloudy	13
Nassau	Fair	25
New York	Rain	8
Nice	Fair	9
Nicosia	Fair	20
Oslo	Snow	-7
Paris	Rain	6
Perth	Sun	35
Prague	Snow	-1
Rangoon	Sun	32
Reykjavik	Snow	-1
Rio	Thunder	29
Rome	Cloudy	13
S. Frsco	Fair	14
Seoul	Sun	-1
Singapore	Shower	30
Stockholm	Snow	-7
Strasbourg	Drzzl	4
Sydney	Shower	28
Tangier	Fair	15
Tel Aviv	Sun	22
Tokyo	Fair	8
Toronto	Sun	-6
Vancouver	Rain	9
Venice	Cloudy	5
Vienna	Sleet	3
Warsaw	Snow	-1
Washington	Cloudy	11
Wellington	Cloudy	21
Winnipeg	Cloudy	-18
Zurich	Cloudy	3

FINANCIAL TIMES

COMPANIES & MARKETS

WEDNESDAY JANUARY 13 1999 Week 2

INSIDE

Roche watches its options shrink
Roche, the 102-year-old Basle pharmaceuticals group, which says it wants to be one of the big three pharmaceuticals companies and has been tipped regularly as a potential bidder for medium-sized rivals, is seeing its options shrink as competitors around it pair off. Page 16

Lucent faces challenging acquisition
If Lucent Technologies, the leading US maker of telephone network equipment, is to acquire Ascend Communications, the data networking company, it will have to marry two business cultures as well as their technologies. Page 15

Japanese carmakers coy on mergers
Japanese carmakers, amid the industry's deepest slump in decades, have remained silent over last week's reports that they are in alliance negotiations with European and US partners that would represent the easiest way to put them back on the road to recovery. Page 14

Biotech sector faces tough year
It will be a second tough year for biotechnology companies as financing becomes tight. Last year, initial public offerings were scarce, and groups that did put deals together saw prices plummet after coming to market. Page 15

BoJ to sell $183bn of financing bills

The Bank of Japan is set to sell off its Y20,000bn ($183bn, €76.7bn) holdings of financing bills and short-term government securities. Plans by the government of Keizo Obuchi (left) to liberalise the Y30,000bn FB market as well as the Bank's unease about the rise in its balance sheet triggered the move. The FB market had been dominated by the bank and government institutions. Capital Markets, Page 20

Bombay surge hit by profit-taking
Six weeks ago, the Indian BSE 30 index was near a five-year low, the government had been beaten in regional elections, and inflation was soaring. But stocks defied conditions to rise 30 per cent only to lose 78 points in profit-taking yesterday. Emerging Market Focus, Page 32

Sharp looks to counter yen rise
Sharp, the Japanese electronics manufacturer facing weaker-than-expected sales volumes, may shift production overseas and procure more parts in Asia following the strengthening of the yen against the dollar. Page 14

Cocoa group develops hybrid tree
The Cocoa Research Institute of Nigeria claims to have developed a hybrid tree, developed from 59 varieties, that combines longevity, low maintenance and disease resistance with frequent, fatter yields. Commodities, Page 22

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MARKET STATISTICS

Prada sells stake in Gucci to LVMH

By Alice Rawsthorn in London, Paul Betts in Milan and Samer Iskandar in Paris

Prada, the Italian fashion group, made a profit of $140m yesterday by selling its 9.5 per cent stake in Gucci, its arch-rival, to LVMH, the acquisitive French luxury goods group.

Patrizio Bertelli, Prada's chief executive and husband of chief designer, Miuccia Prada, described the deal as "*simpatico*". He secretly purchased the Gucci shares for an average price of $46 each last summer, but nursed a loss on the investment when its share price fell.

Gucci's shares soared after last Wednesday's disclosure that LVMH, which controls the Christian Dior and Givenchy fashion houses and Louis Vuitton luggage, had acquired a stake of more than 5 per cent. The news surprised Gucci.

Analysts suspect that LVMH, chaired by Bernard Arnault, bought more Gucci shares in the market last week. They estimate that, with Prada's former stake, LVMH now owns nearly 20 per cent of Gucci.

Prada, advised by J.P. Morgan, the US investment bank, sold its Gucci shares to LVMH for $70.50 each. It has also secured a commitment from LVMH that if it launches a successful tender offer within 12 months, Prada will receive a premium on an offer price of more than $70.50.

If an offer is made within three months of yesterday's deal, Prada can claim 80 per cent of the difference between $70.50 and the tender price. The premium reduces to 50 per cent by the final three months.

Prada is entitled to a smaller benefit if an LVMH offer is unsuccessful. It cannot claim anything in the event of an unsolicited third party bid. LVMH, which has also agreed to co-operate with Prada in areas such as marketing and production, is obliged by New York stock market regulations to clarify its long-term intentions towards Gucci by Friday. "Knowing Bernard Arnault, he'll keep everyone in suspense until the last minute," said one analyst.

Gucci's shares slipped by €2.65 to €56.9 yesterday, having hit €61.0 on Friday amid frenzied bid speculation. LVMH's shares, which also made strong gains on bid hopes, were down €4.60 to €206.40 in Paris yesterday.

Analysts suspect Mr Arnault may decide to retain a sizeable minority position in Gucci rather than stage a full bid. He might find it hard to persuade Domenico De Sole, Gucci's president, and Tom Ford, chief designer, to stay if LVMH assumes control.

Gucci's new collection was launched in Milan at the weekend

Utilities' US deals worry UK investors

By Jane Martinson and Andrew Taylor

UK institutional investors have voiced concerns about British utilities' moves to buy utilities in the US.

Complaints about the trend come a month after ScottishPower became the first non-US company to enter the $230bn US electricity market with its $7bn bid for PacifiCorp. This announcement was quickly followed by National Grid's $3bn agreed bid for New England Electric System.

Several large UK investors, which declined to be identified, yesterday expressed worries about the premiums being paid for the US companies and the potential to lose money as US regulators claw back any merger cost savings. "The logic of these deals is not all that obvious, not like intra-UK deals where there are potential synergies," said one.

Another large investor in ScottishPower said: "This has all the signs of US deals which have gone wrong in the past. Let's hope it's not another Premier Farnell [a reference to the UK company that came to grief over a US acquisition]."

While they did not say they would vote against the deals, several investors stressed that they were concerned about what could become a "fashion" to buy into the US market, which many fear is overvalued. "Utilities tend to act in a herd-like way and lots of them now seem to be looking in the US," said one.

Advisers to ScottishPower blamed some of the uncertainty on the ground-breaking nature of the deal and the time needed to gain regulatory approval. Utilities have also been reluctant to detail potential savings for fear of tipping off local electricity industry regulators, which may want to claw back the benefits for customers.

Following a whirlwind round of shareholder meetings last month, ScottishPower has virtually fallen silent before publishing offer documents in early March. National Grid has also been reluctant to discuss the scale and nature of potential cost savings.

The Oregon Public Utility Commission, one of five states that will need to approve the acquisition, wants some of the benefits of ScottishPower's takeover to be shared with US customers.

CASH AND EQUITY DEAL MOVES BERMUDA-BASED GROUP CLOSER TO BUILDING UP GLOBAL INSURANCE FRANCHISE

ACE to acquire Cigna business for $3.4bn

By John Authers in New York

ACE, the Bermuda-based insurance group, yesterday agreed to buy Cigna's global property and casualty insurance business for $3.45bn in cash, in a deal that dramatically expands its attempt to build a global franchise.

ACE, founded in 1985, has made a series of opportunistic acquisitions in the past three years, including those of three managing agencies at Lloyd's, the London insurance market. But this is by far its biggest buy, and more than doubles the scale of its property and casualty insurance businesses.

The deal also continues the trend for large diversified US insurers to focus on a narrower range of products. Cigna, which has already withdrawn from reinsurance and individual life assurance, will use the proceeds to build its employee benefits business, which is based around healthcare management companies and pension fund managers.

This strategy is similar to that adopted by Aetna, which has also focused on employee benefits and health insurance, while other companies have shed life assurance businesses to become pure property and casualty insurers.

Brian Duperrault, ACE chief executive, said: "We believe in a diversified company and a diversified earnings stream. I don't see ACE as a consolidator. Our acquisitions have been strategic and purposeful to fill in areas that we thought were necessary."

The deal will be funded by a combination of cash and newly issued equity, with debt and preferred and convertible securities.

While ACE had net written premiums of $883m for the year ended September 1998, Cigna had total written premiums in 1997 of $3.07bn, almost equally divided between US and international business. The new ACE business will derive 50.6 per cent of its revenues from north America, with 19.5 per cent from Europe and 11.2 per cent from Japan.

Eric Simpson, vice-president of property and casualty insurance at AM Best, the rating agency, said the deal was in line with the strategic directions of both companies.

The discussions between ACE and Cigna became public three weeks ago, and neither company's share price moved much on yesterday's news, with Cigna edging up by $¼ in early trading at $83¼, while ACE gained 4 per cent, up $1 5/16 at $34¼. The price, which valued the block of Cigna businesses at 1.4 times their book value, was a little ahead of some estimates.

Arjo Wiggins chief departs in reorganisation

By Virginia Marsh

Anglo-French paper group in shake-up along product lines

Arjo Wiggins Appleton yesterday parted with its chief executive and announced a shake-up of its businesses in moves seen as a prelude to a possible break-up of the underperforming Anglo-French paper group.

Arjo said it was reorganising itself along product rather than regional lines and that the chief executives of its three new divisions would be given a lot of autonomy. This meant it no longer required a group chief executive.

Ken Minton, who becomes an executive chairman, said Philippe Beylier, 62, chief executive since 1997, had left with immediate effect.

Mr Minton denied there "was a need for anyone in the market to make a bid for any of our businesses". He said the reorganised group was capable of improving performances itself. But, he added: "The new structure and our new *esprit* make taking opportunities easier. This could mean investing more in some businesses or floating parts of the group or mergers."

He suggested that speciality and fine papers was the business most likely to be retained. The group aimed to build up a global presence for its merchanting arm, which is mainly European-based, and to obtain a better operational performance from its carbonless and thermal paper business, before their possible disposal.

The shares – which have underperformed the UK market by nearly 80 per cent since the group's formation in 1991 – rose 5½p to 115p, down from a high of 315p in mid-1994.

Analysts, who believe the group's break up value is well in excess of its market valuation, welcomed the news but were cautious given Arjo's history of repeated management upheavals and restructuring programmes.

There was also some concern at the departure of the well-regarded Mr Beylier, who leaves with a £830,000 pay-off. Under Mr Beylier, the group – formed by the merger of Wiggins Teape Appleton, an Anglo-American business, and Arjomari-Prioux of France – has cut costs by £50m ($84m) a year as part of a £120m shake-up plan announced in 1995.

ABN Amro left its 1998 forecast unchanged at £208m (£216m).

Observer, Page 11
Lex, Page 12
Arjo tries origami dose, Page 18

BARRY RILEY

Short-lived europhoria

A more cautious mood has followed the first happy-go-lucky week for the eurozone's stock markets, when the FTSE Eurobloc 100 Index raced up by 7 per cent. Yesterday the main bourses fell between 1 and 2 per cent.

Yesterday also brought confirmation that Germany last year achieved its biggest annual trade surplus since 1989. Ominously, too, Germany's unemployment rate has begun to rise again. After recent so-called europhoria, is there a threat of a return to the eurosclerosis Germany especially suffered from before the expensive boost from unification in the early 1990s?

For the time being, though, the European stock markets are dominated by the twin restructuring themes: institutional investors are revamping their portfolios in accordance with Europe-wide, rather than country-based, benchmarks; and the corporate sector is rationalising across borders, with Fiat and Volvo being the latest to feed the rumour-mill.

Significant sums are being raised by mutual funds in Europe and the US to exploit the fashionable eurozone theme. This is bringing new money into the markets and is further fuelling demand for the large capitalisation leaders. The Eurotop 100 outperformed the Eurotop 300 by nearly 1 per cent last week. The leaders provide the easiest and quickest route to the new benchmarks, especially for non-European investors unfamiliar with the scene.

But there are some party-poopers around. Economic forecasts are generally being marked sharply lower in the face of Europe's developing exports crisis. Not so long ago there was heady talk of 3 per cent growth, after perhaps 2.8 per cent in 1998, but the eurozone's economy seems to be hitting the buffers this quarter. It may accelerate later in the year, helped by interest rates which appear certain to fall significantly below 3 per cent. Or will it?

In its January monthly international review, Lombard Street Research castigates euroland's mix of fiscal and monetary policies as "absurdly deflationary". Growth in 1999 will be no more than 1½ per cent and prospects will be crippled, says the London-based economics consultancy, unless the 3 per cent Maastricht budget deficit ceiling, which Germany, France and Italy will anyhow have trouble meeting this year, is suspended.

We can safely bet that the predictable honeymoon period for the euro will be quickly followed by a more turbulent phase as euroland's centre-left politicians are driven by a renewed rise in unemployment (from a "low" point of 10.8 per cent on average) to seek a confrontation with the bureaucrats of the European Central Bank. Certainly, European governments cannot willingly accept significant gains by the euro against the dollar.

Against this economic background, double-digit consensus earnings growth expectations for eurozone companies will have to be downgraded. With consumer price inflation below 1 per cent (and manufacturing now being hit by deflation) pricing power is being eliminated. And although the restructuring theme remains potentially powerful, it is unlikely that cost-cutting (that is, job-destroying) mergers will be tolerated by the euro-11 governments, given their unemployment problems, as readily as in the US or the UK, where the jobless rates are less than half as high.

Nevertheless, it would be wrong to be bearish about European equities (barring another international crisis of the kind that crippled the Continent's bourses last summer). Euro interest rates are heading lower: to 2¾ per cent according to Credit Suisse First Boston, and to 2½ per cent according to J. P. Morgan and Goldman Sachs. The securities markets will benefit from a looser monetary policy. The only problem, perhaps, is that Europe is short of the kind of technology hot stocks that have given Wall Street's bulls something to chase after.

The eurozone's bourses can still make progress. But they will be advancing into increasingly dangerous territory.

COMPANIES & FINANCE: ASIA-PACIFIC

Toyota to lose Okuda to business forum

By Alexandra Harney in Tokyo

The Japanese car industry was in turmoil yesterday following the nomination of Hiroshi Okuda, president of Toyota Motor, to head the Nikkeiren, a prominent group of business leaders.

The appointment means Mr Okuda is likely to resign his post at the country's number one carmaker at a time when the Japanese recession and global consolidation have plunged the industry into uncertainty.

Although Mr Okuda has accepted the post at the business group, also known as the Japan Federation of Employers' Association, he has not yet named a successor nor indicated his next move within the company.

Toyota said that a decision about the next president would probably be made by June, when the company holds its annual shareholders meeting. Nikkeiren members are expected officially to vote in Mr Okuda as chairman in May.

It is believed that Shoichiro Toyoda, Toyota's 73 year-old chairman, Fujio Cho, executive vice president in charge of corporate strategy, information systems and equipment, and Iwao Okijima, the executive vice president who overseas accounts and personnel, are among the leading candidates for the job.

The sudden appointment has ignited speculation about a management struggle at Toyota, which has widened the gap with other Japanese companies with record profits in recent years.

Toyota has steadily increased overseas sales in each of the three years since Mr Okuda was appointed president and chief executive officer. It now accounts for 45 per cent of car sales in the US.

At the same time, Mr Okuda led the company to make strategic, if controversial, investments in biotechnology and finance, and to take the unusual step of refusing Sakura Bank's request for capital last year.

In the first half of this year, it reported record high operating income of Y286.8bn ($2.62bn), a 0.6 per cent improvement on the same period the year before, although the downturn in Asia and Japan drove pretax profits down 11.1 per cent to Y288.6bn.

Analysts said Mr Toyoda – himself a former chairman of Keidanren, the Japan Federation of Economic Organisations, the other influential business lobby – appeared the most likely candidate to succeed Mr Okuda. He enjoys the critically important base of political and industry contacts and has worked for the carmaker for nearly 50 years, gathering experience in both marketing and manufacturing technology.

Japanese carmakers mum on mergers

Silence raises questions over implications of tie-ups for 'big five', says **Alexandra Harney**

Merger mania may have hit the global automotive industry but in Japan it has hardly registered as a ripple. While reports emerged nearly every day last week that leading car makers – Nissan, Honda and Mitsubishi – are in alliance negotiations with European and US partners, executives and public relations departments in Tokyo seem to have been struck by a collective case of laryngitis.

The silence underscores the importance of the alliances to the Japanese carmakers amid the industry's deepest slump in decades. The mergers represent perhaps the easiest way to put companies back on the road to recovery by clearing balance sheets of heavy debt and lossmaking operations.

As truck sales tumbled to their lowest levels in decades in July 1998, Nissan Diesel, the troubled truck and engine manufacturer, said it had agreed to develop light trucks with Daimler-Benz, the newly merged German-US auto group.

But as reports emerged over the following months that DaimlerBenz aimed to acquire the engine and truck maker, the Japanese company kept to a strict no-comment policy.

Nissan has been equally laconic about reports of alliance talks with Renault, the French carmaker, DaimlerChrysler and Ford.

Mitsubishi Motors, the country's number three car and truck group, has also been evasive. Katsuhiko Kawasoe, Mitsubishi president, told foreign reporters last year that "our basic position is to consider in a positive light any tie-up proposal which brings mutual benefits to the partners in their respective regions and territories".

In fairness, he jokingly said at a recent industry gathering that he had been carrying around a "buying list" of parts of the business he would like to sell.

By contrast, the other merger candidates in the big five have been clear about their intentions. Hiroyuki Yoshino, chief executive officer of Honda Motor, the car and motorcycle group, denied he intended to link up with another group last December, and the company continued to crush such speculation as rumours circulated about a Honda-Ford tie-up last week.

Toyota has also stated its plans to go it alone for the time being, after increasing its share in Daihatsu, the minicar manufacturer recently.

Ford already owns 33.3 per cent of Mazda Motor, but it has not expressed any intention of raising its stake for now. The company has also denied any plans to buy Honda.

General Motors, which last year increased its equity in Suzuki to 10 per cent, has said it would not be averse to raising that share further.

The silence has fed suspicions about carmakers' financial instability at a time when the country's recession and the collapse of domestic car sales to their lowest levels in more than two decades have sent profits tumbling, and raised questions about the implications of tie-ups for the big five. Concerns are especially acute about Nissan, which said last November it expected Y30bn in after-tax losses in the year ending this March, the sixth year out of seven it has been in the red.

Following the downgrade of its debt last August by Moody's, the US credit rating agency, to Baa3, just above junk-bond status, the group was forced to reconsider its borrowing practices, according to company executives.

But analysts point out that the silence may prove a successful strategy during a shaky time for the industry: Japan's car companies can ill afford further declines in share prices, and their weak finances give them little leverage with the likes of DaimlerChrysler, Ford, and GM.

"The potential impact [of the mergers] is so big that the companies can't really say anything," says Chikao Masuzawa, industry analyst at ING Barings in Tokyo.

Shares in carmakers climbed over the past few days amid hopes that mergers would lead to a recovery in companies' sagging earnings and accelerate restructuring efforts.

Katsuhiko Kawasoe: carried a list of parts he wanted to sell AP

Despite the companies' repeated denial of plans for a merger, Nissan advanced Y5, or 1.3 per cent, or Y20, to Y388 yesterday, in its sixth consecutive day of gains.

In contrast, Honda closed unchanged at Y3,720, and Toyota, which has swung wildly over the past weeks, closed yesterday down Y15 at Y2,755.

But with Jurgen Schrempp and Richard Eaton, the DaimlerChrysler co-chairmen, arriving in Tokyo next week, the silence is likely to be broken. For the moment, at least, the companies' strategies seem to have put off the difficult debate about how courtship and marriages will change the shape of the Japanese car industry.

Sharp seeks to combat yen rise

By Alexandra Harney

Sharp is considering shifting production overseas and procuring more parts from south-east Asia in order to offset the effect of the recent strengthening of the yen against the dollar.

The electronics manufacturer, like other Japanese exporters, is facing the possibility of weaker-than-expected sales volumes as its products become more expensive in overseas markets as a result of the yen's rise.

The company, which relies on exports for nearly 55 per cent of turnover, said that the surge of the yen to Y108 against the dollar this week had forced it to revaluate its manufacturing strategy. But Katsuhiko Machida, president, insisted that the impact of the currency movements would not affect earnings enough to necessitate a downward revision.

"We are discussing various measures [to offset the impact of the yen's rise] . . . and within this debate, we have started to discuss the possibility of moving manufacturing overseas," said Mr Machida.

Sharp was also considering using more parts from Asian countries and raising prices on liquid crystal display (LCD) products to combat the negative effect of the rise in the yen, he said. The company, which specialises in LCD products and household and consumer electronics, manufactures nearly 40 per cent of its products overseas.

Mr Machida also outlined a new management strategy, including shortening production cycles and improving investor relations.

The comments came after a devastating first half, when the collapse in Japanese domestic demand and the sharp decline in prices in the international semiconductor market sent parent operating profits plummeting 93.5 per cent, from Y[illegible].72bn to Y1.34bn ($12m). Sales slipped 4.6 per cent to Y643.[illegible]. In the full year, the group anticipates non-consolidated operating incomes will tumble 77.[illegible] per cent to Y5bn.

Sharp was keen to point out that the company was continuing to invest in research on new technology, particularly in LCD products, in spite of the recent slowdown. Although domestic and overseas sales were expected to contract in every division this year, Mr Machida expected 8.8 per cent growth in global demand for semiconductors and nearly a 20 per cent increase in demand for LCD products.

Sing Tao Holdings shares suspended

By Louise Lucas in Hong Kong

Shares in Sing Tao Holdings were suspended yesterday pending details of bankruptcy petitions filed last week against Sally Aw, chairman of the Hong Kong investment and publishing company.

The petitions were filed after Miss Aw failed to repay at least HK$294.2m (US$38m) claimed in a writ by Ho Ying-chie, chief executive of Hong Kong Tobacco. Sing Tao previously said that the petitions were invalid, but did not elaborate.

Investors in Sing Tao are concerned at the impact a possible bankruptcy would have on the sale of the company, which is under way.

Attempts to find a buyer have collapsed, but last month China Enterprise Development Fund (CEDF), a Dublin-listed fund whose investors include Fidelity Far East Fund and University of Richmond, agreed to pay HK$115.8m for a 23 per cent stake in the company.

Sing Tao has said there would be no adverse impact on the company, but shareholders have sold down Sing Tao and analysts question whether China Enterprise Development Fund will still find the HK$1.20 a share price tag attractive.

The sale is not conclusive: regulations governing CEDF might prevent it from taking the agreed 23 per cent stake, instead taking half as much and finding a new partner for the balance.

Kobe Steel restructures semiconductor operations

By Alexandra Harney

Kobe Steel is transferring marketing of semiconductor products to an affiliated group, completing the Japanese steel group's effort to move its chip business off the parent company's books.

The deal is part of Kobe's continuing attempt to restructure its management operations and restore its semiconductor business, which last year recorded sales of Y8bn ($73m), to profitability.

Kobe will move the marketing of logic devices and memory chips to Shinsho, a listed trading company 37.4 per cent owned by Kobe Steel, next month. At the same time, production will be shifted to KTI Semiconductor, a joint venture with Micron Technology, the US chip manufacturer, as part of a deal agreed last June.

The move will be a boost for Shinsho, which has been supplying manufacturers in the US and Japan with chips made by Kobe and other groups for several years. It will also help Kobe limit its losses from the volatile memory market. The company said it expected sales of Micron chips alone to jump from Y2bn next year to Y10bn by 2001.

Shinsho said it planned to supply dynamic random access memory integrated circuits and application-specific products to Fujitsu, NEC and Sharp, the Japanese electronics groups.

The collapse in chip prices and the slowdown in steel demand from Japan and Asia as a result of the economic crisis led to Y5bn in first-half parent pre-tax losses at Kobe last year and to another Y5bn in pre-tax losses at the twelve-month stage. This compares with profits of Y25.2bn the previous year.

Analysts welcomed the restructuring efforts but said tough conditions in the steel market and the possibility of a drop in semiconductor prices would mean continued losses for the next two years. "Rather than looking at increasing sales, they should really be looking to putting a stop to these losses," said Kenichiro Yoshida, steel analyst at Salomon Brothers in Tokyo.

Shares in Kobe advanced Y2 to Y82, and Shinsho fell back Y1 to close at Y150.

GOLDMAN SACHS VOLUBLE THORNTON AND QUIET THAIN VIEWED AS IDEAL POST-IPO PAIRING

Opposites attract as bank enters new era

By Tracy Corrigan in New York

The timing of the elevation of John Thornton and John Thain to co-chief operating officers of Goldman Sachs on Monday – ahead of the firm's much-heralded initial public offering – may have come as something of a surprise but the pairing of the two bankers to lead the investment bank in a new era as a public company has been carefully prepared.

Two years ago, Mr Thain was sent to London, where Mr Thornton was already based, and the two were named co-chief executive officers of Goldman's European business.

The move, dictated by Jon Corzine – until yesterday co-chairman and chief-executive – was widely seen as a test of the pair's ability to work together, as Mr Corzine planned for his succession. Though some in the firm predicted fireworks, the soft-spoken Mr Thain and the more outspoken Mr Thornton worked well together.

The 45-year old Mr Thornton has spent much of his career building Goldman's business outside the US. He joined Goldman's mergers and acquisitions department in New York in 1980. In 1992 he started building the investment banking business in Europe and two years ago, he was given the job of rebuilding the Asian business, which had been decimated by the firm's retrenchment in 1994. But he remained based in London and plans to stay there in *his new role*. His broad experience in building overseas businesses for the firm is somewhat unusual.


Faces fit: John Thornton (left) and John Thain seem to gel

"He is the first that has made it to the most senior ranks of the firm having spent most of his career overseas," said Alan Hilliker, an executive search consultant at Egon Zehnder.

Mr Thornton made his name in Europe with the 1991 defence of Imperial Chemical Industries against a bid from Hanson but has attracted controversy, most notably over hs chairmanship of Laura Ashley, the troubled UK retailer.

Mr Thain joined Goldman Sachs in 1979 in the corporate finance department but moved to mortgage securities which he rose to head in 1987. He became a partner in 1988. He is regarded as a fierce intellect who commands attention in a quiet way.

Ironically, the two men were reluctant to see the firm abandon 130 years of private partnership, a move close to the heart of Mr Corzine.

While Hank Paulson, now chief executive officer, kept his opinion on the move quiet ahead of the June vote on the issue, both Mr Thain and Mr Thornton expressed some opposition.

Mr Thain, according to people familiar with his views, was reluctant to abandon the principle of partnership. Mr Thornton, on the other hand, was keen that the firm should examine the option of merging with another substantial financial services institution before pursuing the IPO path single-mindedly. The other difference, people say, was that *Mr Thornton was considerably* more vocal.

Mr Thornton's liking for merger options could now be given a second look but, having bought into the IPO process last summer, the new management is unlikely to have much room for manoeuvre.

Lucent may marry after long engagement

US telecoms group aims to find a suitable partner in Ascend, writes **Roger Taylor**

Lucent Technologies, the leading US maker of telecommunications network equipment, has taken a long time hammering out its offer for Ascend Communications, the data networking company.

The two have been in talks for months and a deal has always seemed likely. Although both sides deny it, each needs the other.

Telecoms companies, which now manage increasingly large amounts of computer data as well as telephone calls, need machines to handle both. So traditional telecoms equipment makers have had *rapidly to* buy expertise in data networking.

Last year, Nortel, the Canadian telecoms equipment company, bought Bay Networks. At the time, Lucent was exploring a tie-up with Cisco Systems, the leading data networking company. Since that failed, Lucent has been eyeing the alternatives.

Ascend has been the obvious target because of its focus on the so-called "carrier class" market – big machines used to drive the networks of internet service providers and telephone companies. The only other large independent US data networking firm, 3Com, focuses on equipment for home and business use.

Lucent has been trying to build its own data-networking business in-house with a string of smaller acquisitions. However, it does not have the luxury of time. The big telephone network operators are deciding on their *future equipment needs now* and Lucent must show it can deliver.

The possibility of a deal last autumn was stymied by the stock-market weakness which saw both companies' shares fall sharply.

Since October, Lucent's shares have soared from about $60 to over $109, valuing it at about $150bn. Ascend has had a rougher time. Its shares, now trading at about $76, have still not managed to beat their high of $77¾ in January 1997.

If Ascend's directors, who met yesterday, and its shareholders decide to accept Lucent's offer, Lucent's problems will just be starting. The reason for the failure of Cisco's talks with Lucent, and one of the most frequent doubts expressed about Nortel's acquisition of Bay Networks, is the problem of integrating the entrepreneurial west-coast business culture of the data-networking companies into much larger, more *bureaucratic telecoms equipment* makers.

Lucent has no history of successful large acquisitions in its two years as an independent company. Further back, when Lucent was part of AT&T, the picture is no more encouraging. Richard McGinn, Lucent chief executive, was president of AT&T's computer arm when it launched its disastrous purchase of NCR, the computer company.

The biggest losers from any link-up between Ascend and Lucent are Cisco, Lucent's biggest competitor, and the European telecoms equipment companies which have yet to build credible data networking businesses.

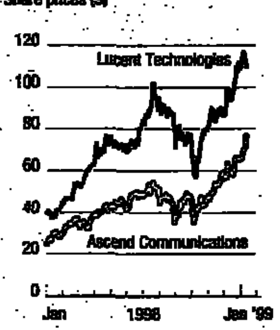
Cisco is unlikely to make a counter-bid for Ascend. It has little to gain in terms of technology and has said its strategy is not to make defensive acquisitions but to buy new technologies.

The depressed share price of Alcatel, the French group, *leaves it in no position to* counter-bid. Siemens of Germany has a link with Newbridge Networks, the Canadian data networking firm, which could lead to a full merger. Ericsson of Sweden is understood to be looking at a number of smaller businesses. And after Ascend and Newbridge, there are no big ones left.

There are many positive aspects to the link between Ascend and Lucent. They have similar technical visions – combining internet protocols with the older ATM systems. They have complementary customers – *Ascend is strongest among* internet service providers and the newer telephone companies, while Lucent's strength is with the traditional Bell phone companies.

However, if the deal goes through, the real challenge will be for Mr McGinn to marry the two companies as well as his engineers are able to bring together the new and old technologies.

Lucent/Ascend
Share prices ($)



Source: Datastream/ICV

E*Trade to take stake in web bank

By Tracy Corrigan in New York

E*Trade, the internet brokerage, plans to take a 28 per cent stake in a new internet investment bank set up by two well-known west-coast bankers.

E*Offering, which expects to begin underwriting public offerings for sale to E*Trade subscribers, is being set up by Sandy Robertson, founder and former head of Robertson, Stephens, the west-*coast investment bank now* owned by BankBoston, and Walter Cruttenden, former chief executive and president of Cruttenden Roth, another west-coast investment bank.

Under the terms of the agreement, E*Trade will have an option to increase its ownership to 51 per cent. No financial details were disclosed.

E*Offering plans to conduct IPO roadshows and distribute research and shares over the internet. As much as 50 per cent of each deal will be distributed to online retail investors and E*Trade customers will generally have first access to these shares, the company said.

Like Wit Capital, another internet investment bank, E*Offering plans to undercut traditional investment banks, charging companies "less than the 7 per cent of gross funds typically generated by investment banks for IPOs", it said.

It plans to focus initially on equity underwriting of about $25m-$50m and to offer research coverage, trading support and mergers and acquisitions advice to clients, and eventually to add debt underwriting.

Mr Robertson founded Roberston Stephens in 1978. He resigned last year and cannot assume an active management role until his current "non-compete" agreement with Robertson Stephens expires in about 12 months.

Tie-ups the way for hard-up biotechs

By Victoria Griffith in Boston

This year will be one of the toughest ever for biotechnology companies as financing becomes extremely tight – a real danger for corporations that sometimes struggle to hand out pay-cheques at the end of the month.

"The capital just isn't *there*," says Peter Feinstein, chairman of biotech consulting firm Feinstein Kean Partners. "I foresee a heightened failure rate in the industry, as companies get weeded out."

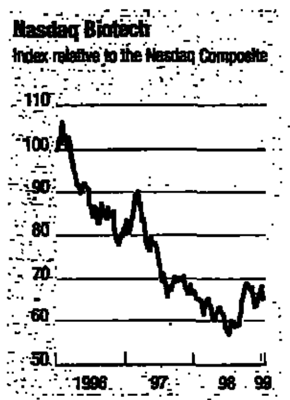
For the biotech sector 1998 was a dismal year. Initial public offerings were scarce, and companies that put deals together saw share their prices plummet after coming to market. At the end of April, Nanogen raised $429m at $11 a share. In mid-December, its stock price was stuck at just more than $4, up from a $3 low. RiboGene came to the market in May at $7 per share but had dropped to about $2¼ seven months later.

Such falls did not ingratiate the industry with investors and in the second half of 1998, the public equity window closed. "Of even more concern than the lack of equity financing was the lack of interest from venture capital funds, flush with cash, which held back on biotechnology," says Anna Kazanchyan, a healthcare analyst at Barington Capital.

Even established biotech companies had a hard time raising money. Just $450m was raised in secondary offerings during the first nine months of 1998, compared with $1.3bn in 1997. With analysts predicting this year will be even worse, the sector is bracing for tough times. "Capital has dried up for the foreseeable future," says Ms Kazanchyan.

Such anti-biotech sentiment is a long way from the industry's heyday in the 1980s. In 1980, an IPO by Genentech sparked a feeding frenzy. Half an hour after the stock was floated at $35 per share, the price shot up to $88.

Nasdaq Biotech
Index relative to the Nasdaq Composite



Source: Datastream/ICV

Investors may be right to feel let down. As late as the early 1990s, many investors believed new technology – using "designed" molecules rather than the old trial-and-error methods – would replace traditional pharmaceutical companies. Yet the path to market has proved longer and more arduous than anyone had anticipated.

In reality, the industry has yielded few lucrative products and only about 12 companies can be expected to report a profit this year.

However, disappointment in the sector has not kept enthusiastic scientists from starting new ventures. There are more than 350 biotech companies in the US and pruning may be overdue. However, for those that survive, financing will continue to be a problem.

Some will die a slow death. A few may be snapped up by larger groups in the sector, profit-makers like Biogen, Genzyme and Chiron.

Those that survive will probably look to the pharmaceutical industry for funding. It has become increasingly interested in joint ventures with biotech to gain access to new technology at relatively low cost.

"We haven't been interested in acquisitions because we can pick the best projects to partner with, regardless of who runs them," says Barry Hesp, vice president of technology at pharmaceuticals company Pfizer.

In return for funding, biotech companies are often forced to give up large shares of future profits or they may be dropped from a programme at the drop of a hat, often not because the research is not going well but because the pharmaceutical group has decided to concentrate on other disease areas.

As the biotech industry grows increasingly desperate for capital, pharmaceuticals companies will be calling most of the shots.

NEWS DIGEST

INSURANCE AND PENSIONS

Aegon to sell Worldwide Insurance for $162m

Aegon, the international life assurance and pensions group, is to sell Missouri-based Worldwide Insurance Company and its property and casualty subsidiaries to American Financial Group for $162m, including about $47m in pre-closing dividends.

Cendant, the US direct marketing and franchising group, had provisionally agreed just over a year ago to buy Worldwide for $219m, but pulled out of the deal in October. Aegon acquired Worldwide as part of its $3.6bn purchase of Providian, the Kentucky-based insurer, in 1997.

Bart Herbert, executive vice-president and chief marketing officer of Aegon USA, said it wanted to concentrate resources on growth in the life and health insurance, and *retirement and savings product sectors.*
Andrew Bolger, Insurance Correspondent

PAPER

Asia effect hits manufacturer

International Paper, the largest US paper manufacturer, yesterday announced profits and sales for 1998 slightly below 1997 levels, mainly due to the continued impact of the Asian economic downturn. Earnings for the year, before special items, slipped from $310m to $308m, on sales which dropped from $20.1bn to $19.5bn. Once special items were included, it made a profit of $213m, following a loss of $151m in 1997.

The company said that it had seen "signs of improvement in supply-demand relationships", and announced price increases in linerboard and printing papers. This helped its shares gain $3/16 to $46 5/8 in early trading.
John Authers, New York

CATALOGUE RETAILING

Lands End to cut jobs

Lands End, the Wisconsin-based catalogue retailer of upmarket casual clothing, is to cut about 11 per cent of its salaried staff positions and close three of its 19 stores. The company also said it would close down its Willis & Geiger division, having failed to find a buyer for the unit. The restructuring plan, which will result in the loss of 94 of its 888 salaried jobs, follows a difficult period for the company, which a few years ago was ambitiously seeking to push into overseas markets. The company has seen numerous management changes over the past months, *and in the most recent quarter, to end-October, the company* barely broke even. **Nikki Tait, Chicago**

ARMOURED VEHICLES FRENCH AND UK GROUPS SAY PLANNED JOINT VENTURE WOULD BECOME LEADING EUROPEAN SUPPLIER

Vickers and Giat sign co-operation deal

By Alexander Nicoll, Defence Correspondent

Giat Industries of France and Vickers of the UK yesterday took a step towards rationalisation of Europe's overcrowded armoured vehicle industry by signing a letter of intent to co-operate on marketing, design and development.

The two companies said they would discuss setting up a joint venture covering these areas as well as sales, purchasing and programme and contract management.

However, the arrangement would not affect markets in which Vickers, maker of the Challenger 2 tank, and Giat, which makes the Leclerc tank, were competing for orders.

Nor would it affect the companies' manufacturing plants.

Paul Buysse, Vickers chief executive, said the agreement "should unlock significant benefits for both parties".

Jacques Loppion, chairman of Giat, said both companies remained free to pursue industrial arrangements in their own countries.

But he said the link "will contribute to the inevitable process of consolidation in Europe".

The two companies said the new venture would become the leading European supplier of land defence equipment.

Both companies urgently need to consolidate their positions after recent moves by other companies in the sector.

Giat, which is state-owned, is in the midst of a restructuring programme intended to curtail heavy losses.

Mr Loppion plans to eliminate 3,700 jobs, leaving 6,700 people producing a wide range of armaments.

Vickers faces a dearth of orders for its tanks and specialised military vehicles after it completes delivery of 386 Challenger 2 tanks to the British Army.

So far it has sold the model only to Oman, though it has hopes of orders in Greece and South Africa.

Its defence arm employs 1,600 people, but this will fall with the planned closure of its Leeds factory.

Vickers was on the losing side in a competition to build the next generation of armoured personnel carriers for Britain and Germany.

Alvis and GKN Defence, both on the winning side, recently merged.

German companies, such as Krauss-Maffei, Wegmann and Rheinmetall, are widely expected to be the most powerful forces in a rationalised European industry.

However, a venture between Vickers and Giat would produce savings.

By operating jointly in purchasing they would have greater clout with the suppliers to which the bulk of tank manufacturing is sub-contracted – and many of which are common to both companies.

By joining forces on development they would be able to pool scarce funding for research and technology and they would also be in a stronger position to win business on future European armoured vehicle programmes.

Doors close for Roche as it seeks room at the top

Options are shrinking for the Swiss drugs group if it wants to make acquisitions, write **William Hall and David Pilling**

Roche: finding the right chemistry

Company	Country	Sales ($bn)
Merck	US	27.1
Pfizer	US	14.5
Novartis	Switzerland	22.1
Glaxo Wellcome	UK	13.0
Bristol-Myers Squibb	US	18.3
Roche	Switzerland	17.1
Eli Lilly	US	9.8
Schering-Plough	US	8.0
AstraZeneca	UK	16.9
Aventis	France	19.8

Sources: BT Alex. Brown; Datastream/ICV

Whenever there are rumours of mergers and acquisitions in the drugs industry, one name always crops up – Roche. The 102-year-old Basle pharmaceuticals group has been tipped regularly as a potential bidder for medium-sized rivals such as Zeneca and Astra, which themselves agreed to merge in December.

Therein lies the problem. For if Roche, which says it wants to be one of the world's big three pharmaceuticals companies, really is seeking an acquisition, its options are shrinking by the day. As well as Astra and Zeneca, four other companies have agreed to pair off in the past few weeks – Germany's Hoechst with Rhône-Poulenc of France, and two relatively small French companies, Sanofi and Synthélabo.

"These are the last bite-size deals that people can do," said one investment banker. "The other companies out there are either too big or too small for a company like Roche."

That leaves the Swiss company, which reports annual sales tomorrow, looking like a wallflower, despite its protestations that it is not seeking to pair off.

"I don't waste time thinking about this," Franz Humer, the company's chief executive, said recently of persistent speculation that he was about to pounce. "We have to concentrate on managing what we have . . . I don't know where Roche ranks after the latest mergers, and I don't get excited about this."

The fact is that Roche's position in the global drugs league has been slipping. In 1995, it was the world's biggest drugs company by stock market capitalisation. Now valued at $118bn, it ranks sixth, largely because it has underperformed US drug companies, such as Merck and Pfizer, but also because of other mergers. Although it is top in diagnostics, flavours and fragrances, as well as in vitamins, in pure pharmaceutical terms it only just scrapes into the world's top 10 by revenue.

Martin Ebner, Switzerland's best-known corporate predator and the second biggest shareholder after the founding families, sounds increasingly restive about Roche's lacklustre stock market performance.

His view has been reinforced by a succession of recent mishaps at the company. Posicor, a new heart drug, was withdrawn; the European Union halted sales of Tasmar, a treatment for Parkinson's disease; and the launch of its potential anti-obesity blockbuster, Xenical, was postponed by US regulators. There is concern among some analysts that several of Roche's most promising development projects have been shelved.

Roche is also under-represented in the US, where the drugs market is growing roughly twice as fast as in Europe, the company's main market.

It is also considered far too dependent on low-margin sales to US hospitals.

Roche has made one recent acquisition, with the $10bn purchase in 1997 of Boehringer Mannheim, a German drugs company strong in diagnostics. But many believe this will not be Roche's last move.

"I think they'll do a deal pretty soon," said one investment banker familiar with the company. "Roche is very opportunistic."

Some analysts have speculated that taking over Zeneca, the UK's third biggest drugs company, would plug many of Roche's gaps. Not only would Zeneca provide a quality portfolio of cancer drugs, but it would also give Roche a leg-up in the US, where the UK company is strong.

However, breaking up Zeneca's deal with Astra would not be easy. The Swiss company's paper might not attract UK institutions, which hold 95 per cent of Zeneca's shares.

Neither would a cash bid, including perhaps £35bn ($57bn) of goodwill, be easy for Roche to mount, despite its deep pockets.

Another possibility could be a bid for Astra, the Swedish company, especially if the deal with Zeneca fell through. Last August, HSBC Securities said a merger with Astra made excellent strategic sense.

Astra also has a reasonably strong US presence, largely through its blockbuster ulcer drug, Losec.

A third option might be to go for a US company in order to gain US market presence. But even the second-tier US companies, such as Schering-Plough, American Home Products and Warner-Lambert, have market capitalisations in the $70bn-$85bn range – difficult for Roche to swallow.

BT Alex. Brown estimated recently that if Roche geared up to four times interest cover, it could afford a $30bn acquisition.

It could conceivably spend more if it sold its non-pharmaceutical businesses, which together generate estimated operating profits of about SFr1.5bn ($1.07bn) a year.

There is yet another option: merger. Until now, a merger has been all but ruled out. Roche is unusual among its peers in retaining an antiquated capital structure. This allows members of the founding families to control 50.01 per cent of the company while owning only 13.2 per cent of the capital. If that were changed, Roche's independence might be far less secure.

Michael Sjöstrom, pharmaceutical analyst at Bank Pictet, believes a merger is every bit as likely as an acquisition. In any event, his view is: "They cannot reach the top spot on their own."

UPC plans to buy out its Dutch partners

By Gordon Cramb in Amsterdam

United Pan-Europe Communications (UPC), the largest private sector European provider of cable television services, plans to buy out its Dutch partners to take full ownership of its operations in the Netherlands after its flotation on the Amsterdam and Nasdaq exchanges, expected in the next few weeks.

Analysts' valuations of UPC have ranged from $500m to more than $1.3bn. The company has been wholly owned by United International Holdings (UIH) of the US since Philips, the Dutch electronics group, sold its half share.

Mark Schneider, chairman, said yesterday that buying out its Dutch partners – MediaOne International of the UK and Nuon, a domestic energy distributor – would "make sense". UPC has 3.4m subscribers in 11 markets, of which its two ventures in the Netherlands account for nearly 1.4m.

Mr Schneider said he expected Nuon to focus on its energy business. The relationship with MediOne has soured due to differences over moves by A2000, the UK company's joint venture which has a cable monopoly in Amsterdam, to pursue a push into telephone services.

UPC sees what it calls a triple play of supplying video services, telecoms and internet connections via upgraded cable infrastructure as key to its growth.

With more than 30,000 personal computers already connected to its lines, it claims leadership among broadband internet service providers in Europe.

The introduction of these services brought revenues from its core cable TV business down to 92.4 per cent of the total Fl 282.1m ($146.5m) in the nine months to last September, compared with 99 per cent a year earlier. Earnings before interest, tax, depreciation and amortisation (Ebitda), a measure of performance used in the industry, were Fl 107.8m, though the investment in its network left a net loss of Fl 171.9m.

UIH will retain an unspecified majority in UPC after an issue of new shares being led by Goldman Sachs as bookrunner, with Morgan Stanley Dean Witter as joint global co-ordinator. A retail offering is expected within the Netherlands, while it will be marketed internationally to institutions.

UPC expects that losses from telephony and the internet on an Ebitda basis, which approached Fl 20m in the nine months, will be erased by early 2001. Proceeds of the share issue will go towards a continued upgrade of its networks and the purchase of equipment needed to connect customers to new services, which will include pay-per-view films.

NEWS DIGEST

MINERALS

Potash Corp seeks state backing for Israeli buy

Potash Corporation of Saskatchewan, the world's largest potash producer, told the Israeli government yesterday that it would move to secure regulatory approval after it had reached an agreement to acquire a majority interest of The Israel Corporation, one of the country's biggest holding companies. The move came after the Israeli government told the company it would need state approval before acquiring control of Israel Chemicals, the export-driven chemicals group.

Earlier this week, the Canadian group said it had talks with companies owned by Israel's Eisenberg family to buy up their 53 per cent share of Israel Corp. Potash denied reports it intended to bid on all outstanding shares and eventually delist Israel Corp.

Israel Corp holds a 52 per cent of Israel Chemicals, which has potash subsidiaries with a strong presence in Europe and Asia. Last year the Israeli government sold its remaining 31.5 per cent stake in Israel Chemicals. But it retained special rights to veto ownership, since Israel Chemicals has exclusive access to the mineral-rich Dead Sea. **Avi Machlis, Jerusalem, Scott Morrison, Toronto**

INVESTMENT

AIM Global sets up euro fund

AIM Global Advisors, part of the Amvescap fund management group, announced yesterday it had set up a new euro money market fund. The fund, which is registered in Dublin but managed from London, was set up in response to demand from international clients with European operations. Among its first investors will be a Japanese insurance group, Koa Insurance. AIM Global said that its fund would give companies the opportunity to save money by rationalising their cash holdings across different euro-zone countries. **Vicki Bakhshi**

CORRECTION

Kvaerner

Kvaerner, the Anglo-Norwegian engineering and construction group, has sold the bulk of its US housebuilding activities to Beazer Homes USA, which is unrelated to Beazer, the UK construction group. This was incorrectly reported in the FT of January 6.

Tractebel quiet on senior change

By Emma Tucker and Neil Buckley in Brussels

Tractebel, the Belgian energy group, yesterday declined to comment on reports that Gerard Mestrallet, chief executive of the French group Suez Lyonnaise des Eaux, would oust Philippe Bodson, Tractebel chief executive, by March.

But analysts said the two men were heading for a clash over the future of Tractebel and Mr Bodson's reluctance to accept the company's integration into the French group.

Mr Bodson has made clear he would like to merge Tractebel with two sister companies – Electrabel, the electricity monopoly, and Distrigaz, the Belgian natural gas utility – to strengthen its position ahead of energy liberalisation in the European single market.

Increased access to the cash generated by Electrabel's domestic operations would also accelerate Tractebel's international expansion.

But Suez – which owns 50.3 per cent of Tractebel – is more cautious, saying it has nothing against such a merger in principle, but would not wish to see its stake diluted.

Analysts said that a Tractebel-Electrabel merger, which made industrial sense, could be achieved in a way that did not dilute Suez's stake. They said any desire to remove Mr Bodson was more likely to be the result of a personality clash.

A confrontation between Mr Bodson – whose relations with Mr Mestrallet are known to be difficult – and Suez-Lyonnaise has been looming since the then Compagnie de Suez, a diversified conglomerate, merged with Lyonnaise des Eaux, the French utility, in 1997.

The merger provoked fears in Belgium of a conflict of interest with Tractebel. As largest shareholder in both Electrabel and Distrigaz, Tractebel dominates the politically sensitive energy sector in Belgium, and any move to unseat Mr Bodson would be politically inflammatory.

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FORECAST PREDICTED LOSSES SIGNAL COUNTRY'S WORSENING BUSINESS CONDITIONS

China profit warnings continue

By James Harding in Shanghai

Seven companies listed on China's domestic stock markets said yesterday they would report losses for 1998, bringing the number of profit warnings in the past week to 17 and underlining the strains on corporate China.

The announcements suggest that listed Chinese companies would report their worst annual results in the nine-year history of the mainland stock markets, sapping the confidence of domestic equity investors and signalling to foreign investors the worsening business conditions in China.

Most of the lossmaking companies blamed fierce competition in export markets, particularly in Asia, and the weakness of domestic consumption.

Many of the world's leading multinationals operating in China have downgraded their expectations for 1999 following worse-than-expected results last year.

Only one company yesterday – Shenzhen Huafa Electronics – has issued so-called B-shares to foreign investors. The other six companies were all listed on China's domestic currency stock exchanges, known as A-share markets.

One company, Sichuan Chengdu Hongguang Industrial, a television components maker, has already achieved notoriety for disappointing investors. It emerged last year that the company had supplied false financial information in order to secure a listing on the Shanghai stock exchange. Hongguang had claimed a profit for 1996 of RMB54m ($6.5m), even though it made a loss of RMB103m. It continued reporting profits while losing money after the listing.

Analysts yesterday suggested the warnings were a sign of greater transparency among Chinese companies, which have shown scant regard for their obligations to inform investors.

The China Securities Regulatory Commission, the markets watchdog, has issued regulations requiring companies expecting a loss to announce the information before the earnings are disclosed. Most listed companies are expected to announce their audited results for 1998 in April.

But greater transparency is only partly responsible for expectations that more companies than ever will report full-year losses. The collapse of export markets – sales of Chinese goods to Asian countries fell nearly 10 per cent last year – have undermined many listed companies.

Brazilian shares hit by threat to IMF package

By John Barham in São Paulo

Share prices in São Paulo crashed yesterday amid fears that a 90-day debt moratorium declared last week by the state of Minas Gerais could threaten approval in Congress of the government's economic stabilisation package. Concern over Brazil also contributed to the slide on Wall Street.

São Paulo's Ibovespa index, which was down 8.9 per cent in afternoon trading yesterday, has fallen 14 per cent since Itamar Franco, the new governor of Minas Gerais, first made his threat to suspend service payments on R$18.5bn ($15.3bn) in debt owed to the federal government. The value of Brazilian bonds on international markets has dropped by 7-9 per cent, and local interest rates have risen by about 400 basis points since last week.

Itamar Franco: governor declared debt moratorium AP

Markets fear a $41.5bn rescue package agreed with the International Monetary Fund in December might unravel, forcing a damaging currency devaluation. The downward lurch in financial markets has landed another body blow on Brazilian companies, already struggling with a severe recession.

Eduardo Tieppo, director at the São Paulo office of Britain's HSBC bank, said Mr Franco "is having an enormous impact. [Previously] there was talk of companies doing short-term operations, but every event that casts doubt on the government's ability to deliver [economic reforms] cools the market."

Brazilian private-sector borrowers have an estimated $4.46bn in foreign debt and interest payments maturing in the first quarter, and $5.02bn in the second. In total, companies and banks must pay $13.81bn in principal and interest this year.

Francisco Gros, head of Morgan Stanley Dean Witter's São Paulo office, said: "We have private companies that would like to access the market." However, none wants to pay spreads of at least 750 basis points over equivalent US treasury bonds.

Belmiro Ribeiro da Silva, an executive at Klabin, a big paper and pulp company, said: "Klabin is interested [in borrowing] but this [moratorium] has upset the markets. There were few windows of opportunity before because markets are waiting for Congress to vote on the [IMF] stabilisation package. [Franco] has just worsened things."

Limited access to international capital markets for banks means they too will have to cut lending to companies, since banks finance most long-term loans with foreign debt.

Fernando Sotelino, head of wholesale banking at Unibanco, Brazil's third largest bank, says companies are borrowing locally to compensate for the closure of international markets. Although local interest rates are much higher than overseas, companies are unwilling to refinance hard-currency debt overseas at higher interest rates, fearing this will make it harder to borrow more cheaply later, once sentiment improves.

Bankers are not too concerned about the immediate outlook for corporate Brazil, worrying more about the impact of a prolonged recession caused by the government's inability to push spending cuts and taxes increases through Congress and meet its IMF targets.

See leader page

Decision on Adig likely this month

By Tony Barber in Frankfurt

The future of Adig, one of Germany's largest fund management groups, may finally be decided before the end of this month if the two banks that own it continue to make progress in negotiations, the banks said yesterday.

HypoVereinsbank of Munich and Commerzbank of Frankfurt have spent years discussing what to do with Adig, a group which manages about DM60bn (€30.68bn, $35.4bn) in assets and in which both banks have a 42.7 per cent stake.

Senior executives representing the two banks are expected to hold meetings before the end of January to resolve the issue.

The central question is whether to split up the fund management group or to agree that one bank should acquire Adig, short for Allgemeine Deutsche Investment Gesellschaft, in its entirety.

But another long-standing problem is that it has proved difficult for the two banks to agree on a value.

Albrecht Schmidt, chief executive of HypoVereinsbank, indicated last year that he would be keen to take full control of the fund management group.

"I think Adig is a very attractive institution. It has a great trade name, and in the past few years it has had a very good performance," he said.

Analysts say the division of responsibilities between HypoVereinsbank and Commerzbank, respectively Germany's second and fourth largest banks, has impaired Adig's efficiency and allowed its competitors, such as Deutsche Bank's DWS group, to take a lead in fund management in Germany.

Ansett NZ records losses

By Terry Hall in Wellington

Ansett New Zealand, the domestic airline and a wholly owned subsidiary of Rupert Murdoch's News Corporation, recorded a sharp profit reverse in the last year, fuelling speculation that it will soon be sold.

However, last year Qantas, the most obvious buyer, said it was no longer interested, apparently after News Corporation put too high a price on the airline. Both Qantas and British Airways already use Ansett New Zealand for internal travel, in preference to the other domestic airline operator Air New Zealand.

Ansett last year made a NZ$2.9m ($1.57m) loss, compared with a net profit of NZ$4.1m in the previous year. The setback followed losses of nearly $230m over the past 13 years.

News Corporation bought control of the company after the New Zealand Commerce Commission refused to allow it to be included in the deal when Air New Zealand bought a 50 per cent stake in all other Ansett operations in 1988.

Ansett New Zealand recorded a 4.1 per cent drop in revenues to NZ$261m in the year to June 30. It blamed the fall on a drop in inbound tourism, mainly from Asia, and competition.

Air New Zealand, its main competitor, said it had made a "sound" profit in flying internal routes in the same 12-month period.

Italy to sell remaining Telecom Italia stake

By Paul Betts in Milan

The Italian government yesterday said it would sell its remaining 4.5 per cent stake in Telecom Italia by the end of April and expected to raise L5,000bn-L6000bn (€2.58bn-€3.10bn, $2.98bn-$3.60bn) for the Treasury.

Salvatore Cardinale, the communications minister, yesterday said the government had no interest in keeping its stake, the largest single shareholding in the telecommunications group privatised last year.

Although the government still owned 4.5 per cent, Mr Cardinale said this carried less weight than the smaller stakes of the privatised group's private shareholders. This was a clear reference to the Agnelli group whose IFIL industrial holding acquired 0.6 per cent at the time of privatisation and is widely regarded as one of the company's most influential shareholders.

The government was left with a larger than expected stake after the failure of Telecom Italia's former management to finalise strategic partnership deals with AT&T and Unisource. The US telecommunications group and the European telecommunications consortium were due to acquire a 1.2 per cent stake each in Telecom Italia.

Sale plans: telecommunications minister Salvatore Cardinale AP

Franco Bernabe, appointed Telecom Italia's chief executive last month, has yet to unveil the group's international telecommunications alliance strategy. However, Mr Bernabe wasted little time in reducing the group's exposure in the high risk digital television business by negotiating a preliminary agreement with Rupert Murdoch to sell the Australian media tycoon up to 80 per cent of Telecom Italia's Stream multi-media subsidiary.

Apart from the stake to be disposed of by the government, no shareholder owns more than 2.29 per cent of the telecommunications group. The 2.29 per cent stake is held by the Bank of Italy. Other shareholders include Nomura International with 1.84 per cent, Nomura Options International with 1.01 per cent, Bear Stearns International with 0.79 per cent, IMI with 0.75 per cent, Credit Suisse with 0.66 per cent and Credito Italiano with 0.7 per cent.

The telecommunications group has been at the centre of takeover speculation in recent days but talk that France Telecom, Deutsche Telekom and yesterday Olivetti were studying a possible deal with Telecom Italia have been flatly dismissed.

Olivetti and a group of its core shareholders led by Roberto Colaninno, Olivetti's chief executive, yesterday denied an Italian newspaper report they were considering bidding for a 29 per cent stake in Telecom Italia. Mannesmann, Olivetti's German partner, also issued a denial.

Pub and drinks shares catch a cold

By David Blackwell

Shares in pub and drinks companies caught a cold yesterday after one of the smaller listed pub operators blamed the flu epidemic for a fall in Christmas sales.

The announcement coincided with a warning from Allied Domecq, the spirits and pubs group, that the falling consumer confidence which appeared in summer had intensified, particularly over Christmas.

The Old English Pub Company, which has fewer than 200 pubs, said like-for-like sales in December fell by 2.9 per cent. Barry Warwick, chief executive, said 314 customers cancelled bookings 48 hours or less before Christmas Day. While sickness usually led to cancellations in the winter, this year had been worse than expected.

Shares in Allied fell from 81½p to 516p, while Old English shares tumbled 48p to close at 262½p. Bass and Scottish & Newcastle fell 74½p and 25½p to close at 805p and 713p while Whitbread, which will put out a trading statement today, shed 10½p to 767½p.

Analysts cut forecasts for Allied from £625m to about £600m ($1bn) after estimating that like-for-like sales in its more than 2,000 managed pubs were down by up to 2 per cent. The group's managed pubs were doing very badly, said one, suggesting that smaller pub companies were more nimble and better able to cope with pressures being felt across the sector.

Allied gave no figures, but admitted that pub results had been affected by "the deteriorating economic trends first evident in the summer months". Sales were lower over Christmas, and interim pub profits would be lower than in the previous first half. Analysts were dismissive of the flu argument put forward by Old English. "Flu looks set to become the winter equivalent of the poor summer weather and the World Cup," said one.

Stuart Price, drinks analyst with CSFB, said that flu might be a contributing element at Old English, given the sort of customers it attracted. But there was an underlying malaise in the market for pubs and beer. This was reflected in figures from Customs and Excise which showed that in October beer volumes released into the UK market from wholesalers and brewers was down 5.7 per cent and production down 5.4 per cent on a rolling quarterly basis.

Some companies had already reported positive like-for-like figures – such as JD Wetherspoon – but these had been achieved through price discounting and some sacrifice on margins. "The immediate outlook remains bleak and it will take further restructuring to sort out the sector," said Mr Price.

Arjo Wiggins tries a dose of origami tactics

The paper group has been left behind in a consolidating industry, writes **Virginia Marsh**

Arjo Wiggins Appleton has undoubtedly been held back by its failure properly to stitch together the US, UK and French businesses from which it was formed eight years ago.

But the underperformance is also the result of some poor investment decisions, multiple management upheavals, its inability to grow in some of its markets and the fact that its largest shareholder has historically taken a passive role.

The group has never exceeded the profit levels made by its different members before they came together, while its share price has underperformed the European paper and packaging sector by about 50 per cent since its formation.

Yesterday's announcement of a reorganisation along product rather than geographical lines is partly an attempt to right a historical weakness under which synergies between businesses operating in different parts of the world have been underexploited. "Parts of the business are still being run virtually as there were in 1990 – separately," said Ken Minton, chairman, yesterday.

It was in 1990 that BAT rolled its two paper businesses together – Wiggins Teape of the UK and Appleton of the US – and spun them off. The following year, the French element was added when the group merged with Arjomari-Prioux. That resulted in Worms & Cie, the French industrial holding group, taking a 40 per cent stake.

Belatedly integrating the mature US and European carbonless and thermal businesses – the former makes copying paper, the latter fax paper – should bring operational benefits.

In this segment the group is far stronger in the US than in Europe. With coated paper it is the other way round – Mr Minton says the lossmaking start-up operations in the US can benefit from input on technology from the established and profitable European business.

But the group is also having to recognise that it skewed its investment too heavily towards carbonless and thermal – markets where it has leading positions but which are in terminal decline – and in coated paper, which it decided to expand to the US in the mid-1990s, a move that has proved costly and a drain on top management's time.

This was done at the expense of investment in fine and speciality papers. This is a far less cyclical, higher value-added business with better growth opportunities.

Confidence in the group has also been undermined by a series of top management changes – the well-regarded Philippe Beylier, who resigned as chief executive yesterday, had been in the job for less than two years. With successive chief executives have come repeated, and expensive, attempts at restructuring. Yesterday's announcement comes just as the group is ending a £120m three-year restructuring that has cut the 1995 cost-base by £50m a year.

But wholesale change has not come earlier, perhaps, because so much of the group has been controlled by Worms.

"Given the appalling performance of the shares, other shareholders may well have pushed for action earlier," an analyst said.

Mr Minton denies that yesterday's announcement is a result of greater pressure to perform following a change of ownership at Worms, which in the past year has fallen under the control of Ifil, the holding company for the industrial investments of Italy's Agnelli family, the controlling shareholders of Fiat.

But it is clear that Ifil will be playing a greater role following the appointment of Luca Paveri-Fontana, its representative on Arjo Wiggins Appleton's board, as executive vice-chairman.

Mr Minton hopes the new structure will enable the group to participate in the consolidation that has been sweeping the paper industry.

Arjo's future shape is unclear but one of the more likely scenarios appears to be that it will sell or demerge its merchanting business and also either dispose of carbonless and thermal or join forces in this area with another producer through a merger or joint venture.

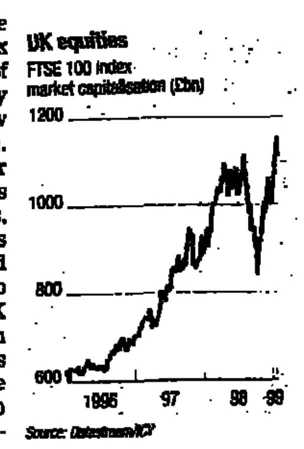
Philippe Beylier: in the job for less than two years

Failure to take part in consolidation has been one of the group's main problems, reflected in its tumbling share price. It is strong in niche markets, but as competitors have merged, it has been left behind.

COMMENT

Index trackers

Every time UK equities surge towards new highs, index tracking funds are accused of reinforcing the bubble. They buy and hold, no matter how outlandish the share price. Worse still, they fund their purchases of the big stocks by selling smaller companies, perpetuating the latter's underperformance and restricting their access to funds. With 20 per cent of UK pension funds now with trackers, and perhaps another 50 per cent that are closet trackers, it is easy to suggest that tracking amplifies a loss of contact with fundamentals.



Source: Datastream/ICV

Is this a problem? It has yet to manifest itself in sustained stock market collapse. And herd behaviour long predates index tracking. If funds are being switched from active to passive management, that is the clients' decision, based on past performance and cost. The flaw is that history may not be the best guide to the future. The active managers can still use their discretion, even if many choose not to. Stung into limiting their bets against a market that has yet to be proved inefficient, they have to take the consequences of piling on the demand for sectors such as telecommunications and drugs. So far they have only benefited. For the future, active managers remain better placed both to take profits and to exploit buying opportunities, including those created by the trackers' forced switches.

But what about the starving of smaller companies? This is graphically illustrated by the billions the trackers are having to find for new share listings by big companies. BP Amoco has seen its market value jump by over £30bn since its merger. Astra Zeneca and Vodafone AirTouch could take the total to around £90bn. This increases the market value of the FTSE 100 index by about 8 per cent, diminishing smaller companies' share of the market. Non-FTSE 100 stocks already account for less than a fifth of it.

In terms of price, the big merged companies may be squeezed higher as demand from domestic index trackers competes with international interest in these stocks. This leaves smaller companies feeling neglected. They may instead attract the attention of industry rivals or venture capitalists. The fact that bids from these quarters generally offer big premiums suggests the previous price was inefficient. But if price distortions are becoming clearer at both ends of the spectrum, active investors will surely re-emerge to take advantage.

RESULTS

		Turnover (£m)		Pre-tax profit (£m)		EPS (p)		Dividends: Current payment (p)	Date of payment	Corresponding dividend	Total for year	Total last year
Bespak	6 mths to Oct 30 ★	41.9	(42.3)	7.03	(6.56)	20.3	(18.9)	5.6	Feb 22	5.1	-	13.7
Bullough	Yr to Oct 31 ★	256.8	(258.9)	12♠	(21.7♥)	6.15‡	(13.12)	4.51	Apr 6	4.51	5.8	5.8
C&B Publishing ф	Yr to Aug 31	21.7	(12.3)	0.911	(0.615)	12.3	(12)	-	-	-	-	-
Ellis & Everard	6 mths to Oct 31	391.5	(364.1)	17	(16.5)	12.4†	(12.6)	3.6	Mar 9	3.5	-	10.6
Enterprise ф	Yr to Oct 31	32.2	(25.6)	3.82	(1.69♠)	10.4	(5.8)	3.2	Apr 30	2.9	4.85	4.4
Irish Continental ♣	Yr to Oct 31	168.1	(139.1)	17.6	(14.5)	68.2	(56.1)	5.18	Mar 26	4.32	7.77	6.48
ITG ♣	6 mths to Oct 31	6.37	(3.4)	0.575♠	(0.128)	4.7	(1.8)	-	-	-	-	-
Jardinerie Ints ф	Yr to Sept 30 ★	5.89	(4.9)	0.327	(0.158L♠)	3.7†	(1.34L)	-	-	-	-	-
Savills	6 mths to Oct 31	37.4	(30.6)	5.22♥	(4.09)	6.7†	(6.8)	1.75	Feb 19	1.25	-	4.75
Scottish Highland	Yr to Oct 31	21.9	(17.7)	4.66♥	(3.45)	14.1†	(12.1)	2.6	Apr 6	2.4	4	3.6
Wyko	6 mths to Oct 31 ★	85.2	(69.7)	6.17	(5.88)	6.41	(6.1)	1.8	Apr 9	1.65	-	3.5

Earnings shown basic. Dividends shown net. Figures in brackets are for corresponding period. ★Comparatives restated. ♠After exceptional charge. ♥After exceptional credit. ‡On reduced capital. †On increased capital. фAim stock. ♣Irish currency.

Buoyant Christmas at Kingfisher

By Peggy Hollinger

Kingfisher, the retail conglomerate, yesterday confirmed it had enjoyed a buoyant Christmas, in stark contrast to the rest of UK retailing, with news of a 3.2 per cent increase in comparable sales over the holiday period.

On the day the British Retail Consortium called for an "immediate and significant" interest rate cut to reverse the industry's falling three-month sales trend, Kingfisher reported itself to be pleased with trading for the nine weeks to January 2.

Sir Geoff Mulcahy, chief executive, said that although customers had been "careful with their money in the run-up to Christmas, overall we are pleased with the group's performance, which leaves us well placed to meet our targets for the year".

Although at 3 per cent, Kingfisher's sales appear to have slowed substantially from the increase of 5 per cent announced for the 13 weeks to the end of October, analysts said this had been expected.

The group had turned in a very strong sales performance in the same period last year – particularly at its do-it-yourself chain B&Q – said one analyst, which made further big increases this year more difficult to achieve.

"It was a very solid statement," she said. "Sure, there has been a slowdown, but it is not that bad in the context of the sector." Profit forecasts were held at roughly £565m-£585m ($963m) for this year.

Kingfisher's trading statement appeared to confirm that consumers had been reluctant to splash out on expensive items before Christmas.

"We have seen a continuation of the trend for people to leave Christmas shopping later and defer big ticket spending," the group said. So the conglomerate's star performances before Christmas came from the low ticket mass merchandise chains, Superdrug and Woolworths.

At Woolworths, like-for-like sales increased by 5.2 per cent, while Superdrug also saw comparable increases of more than 5 per cent.

B&Q returned a like-for-like sales rise of 0.6 per cent, with total sales up by 3.1 per cent.

Darty, the French electricals chain, increased comparable sales by 2 per cent in local currency terms, and 5 per cent in total. Comet, the UK electricals retailer, reported like-for-like sales down 0.9 per cent, and total sales up by 5.8 per cent.

The shares fell 25p to 624½p, although analysts suggested this was due to profit taking rather than any disappointment with the sales performances.

Imetal 'could raise offer by 25%'

By Charles Pretzlik

Imetal, the French metals, building materials and industrial minerals group, could raise its £680m ($1.14bn) hostile offer for UK rival English China Clays by up to 25 per cent, analysts said yesterday.

Olivier Leflon, an analyst at Warburg Dillon Read in Paris, said he believed Imetal could raise its offer from 225p in cash to 280p. This would value ECC at £847m.

He said such a move would lift Imetal's gearing from a current 20 per cent to 156 per cent.

"They certainly can increase the offer," Mr Leflon said. "After the acquisition they will generate substantial cash flow and the speciality chemicals business is a good candidate for disposal."

Analysts believe the speciality chemicals division could be worth up to £160m. The business, Calgon, specialises in water treatment.

However, analysts doubted whether Imetal would feel much pressure to increase its offer as high as 280p. Ken Rumpf at Merrill Lynch in London said: "There is a lack of other likely bidders. Nobody else looks big enough or interested enough to have a go."

In November last year, Schroder Investment Management, one of ECC's largest shareholders, sold more than 3m of its 43m ECC shares. At the time, ECC shares traded at about 165p. Last month it sold another 3.5m at about 175p.

Valerie Mahieddine at Merrill Lynch in Paris, said Imetal had the capacity to raise its bid to yesterday's market price of 240p, which she said would give it gearing of 130 per cent.

She said: "That would not be unbearable. It would stretch the balance sheet and the synergies would have to be very high, but they can do that."

The estimates follow presentations in Paris yesterday by Patrick Kron, Imetal's chief executive. Imetal shares rose 12 per cent yesterday, to €99.8.

ECC shares, which rose more than 50 per cent when Imetal's bid was announced on Monday, fell 2½p to 240p.

Imetal is controlled by a joint venture company owned by Canada's Desmarais family and Belgium's Baron Albert Fre're.

Bespak warns on second half

By Charles Pretzlik

Bespak, the maker of asthma inhalers and other drug-delivery devices and valves, warned that the outlook for the second half was weaker than had been expected.

The shares tumbled 73½p to 912½p yesterday after analysts cut their profit forecasts for this year by up to 8 per cent.

Matthew Lopez, at Dresdner Kleinwort Benson, cut his pre-tax forecast by £1.2m to £14m ($23.5m), against £13.8m, and Liz Crouchman, at CSFB, cut her prediction by a similar amount.

Bespak said in Europe it now expected a more rapid decline in volume of sales from valves which use chlorofluorocarbons as propellants for asthma inhalers to valves using more environmentally-friendly propellants.

Peter Chambré, chief executive, said: "We were expecting a 10 per cent cut in valve sales, but now we're expecting a 20 per cent drop through the year in total." This was because customers were bringing forward their transition from CFCs to the new hydrofluoroalkane propellant. However, he added that the problem was "short-term".

Peter Chambré: expects a 20 per cent drop in valve sales

The group also reported difficulties with Tenax, a contract manufacturer which makes components for medical devices but which has been hit by consolidation among its customers.

Overall, Bespak's pre-tax profit rose 7 per cent to £7m despite a 1 per cent decline in turnover to £41.9m after strong growth from dry-powder inhalers.

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EURO PRICES

EQUITIES

Profit-taking hits Europe in volatile trade

EUROPEAN OVERVIEW

By Vincent Boland

European stock markets fell further yesterday as profit-taking following last week's strong gains took hold and the euro slipped against the US dollar.

The weaker mood was reinforced by some analysts' downgradings and fears about banks' exposure to Brazil and China's investment corporations.

Dealers said trading was volatile, and Wall Street's weaker opening confirmed the downward trend. Share prices in the main markets fell about 1.5 per cent, with analysts noting that despite the weaker tone this week, markets remained very high and vulnerable to further selling pressure.

The FTSE Eurotop 300 index of leading shares fell 19.23 to 1,215.91, while the FTSE Eurotop 100 index fell 39.92 to 2,823. The FTSE Ebloc 100 index of euro-zone shares closed 18.37 lower at 1,029.22.

Most sectors lost but some were worse than others. A particularly grim performer was restaurants/breweries, which tumbled 5.2 per cent after a slew of profit warnings from UK operators. That weighed on the entire sector, and Bass fell €1.10 to €11.44. Fears that people were not drinking enough beer also hit the brewers, with Heineken down €1.20 at €48.85.

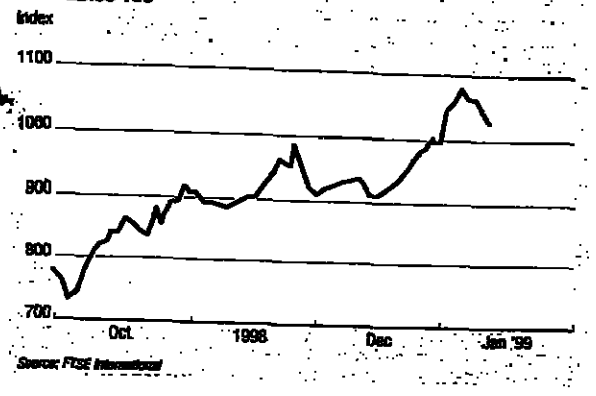
Computer services group Cap Gemini tumbled €20 to €136 as investors took profits amid fears that earnings in the sector could be hit by problems associated with the millennium bug. SAP also continued weaker after last week's disappointing profit figures, down €12.50 at €294.50.

Olivetti, €0.20 lower at €3, sent telecommunications stocks into a spin amid reports, seen as farfetched, that it was preparing to buy a big stake in Telecom Italia, which rose €0.10 to €7.94. Profit-taking knocked back Richemont, which fell €87.80 to €1,452.27 following the agreed takeover this week of Rothmans by BAT, which closed €0.30 higher at €9.23.

Dresdner Bank led the banking sector lower amid concerns about exposure to emerging markets and ended €2.10 lower at €39.50. French banks were also weaker, BNP falling €5 to €73.05.

LVMH fell after it said it had taken its stake in Gucci to nearly 15 per cent through the purchase of shares owned by Prada. The shares fell €4.60 to €206.40.

FTSE Ebloc 100



Source: FTSE International

■ THREE MONTH EURO FUTURES (LIFFE) Ecu1m points of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Mar	96.910	96.910	+0.010	96.910	96.910	100	5944
Jun		97.095	+0.010			0	2463
Sep		97.110	+0.025			0	1532
Dec		96.800	+0.030			0	669

■ THREE MONTH EURO OPTIONS (LIFFE) Ecu1m points of 100%

Strike Price	Calls Jan	Calls Feb	Calls Mar	Calls Jun	Puts Jan	Puts Feb	Puts Mar	Puts Jun
97000	0	0.010	0.025	0.160	0.090	0.100	0.115	0.095
97125	0	0	0.005		0.215	0.215	0.220	

Est. vol total, Calls 200 Puts 100. Previous day's open int., Calls 0 Puts 0

■ FTSE EUROTOP 100 INDEX FUTURES (LIFFE) Ecu20 per full index point

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Mar	2838.0	2845.0	-37.0	2845.0	2838.0	55	5744

■ EURO STYLE FTSE EUROTOP 100 INDEX OPTION (AEX) Ecu10 per index point

	2650 C	2650 P	2700 C	2700 P	2750 C	2750 P	2800 C	2800 P	2850 C	2850 P	2900 C	2900 P	2950 C	2950 P	3000 C	3000 P
Jan	268	8	214	9	167	12	123	19	83	31	51	49	28	77	48	120
Feb	317	53	277	63	233	75	204	90	172	105	143	120	114	152	139	165

Est vol total- . Prev day's open interest total 6,245 . Premiums shown are based on settlement prices.

OTHER INDICES

	Jan 12	Jan 11	Jan 8	1998/9 High	1998/9 Low	Since compilation High	Since compilation Low
DJ Stoxx 50	3468.15	3504.20	3569.24	3670.82	2433.07	3670.82	2433.07
DJ Euro Stx 50	3502.38	3546.40	3616.57	3685.38	2419.23	3685.38	2419.23
MSCI Europe	1220.35	1232.68	1251.82	1315.55	906.59	1315.55	510.78

Source: Extel/part of FT Information. *Subject to revision next day. (u) unavailable.

FTSE Actuaries Share Indices — European series

Produced in conjunction with the Faculty and Institute of Actuaries

Jan 12 National & Regional Markets	Euro Index	Day's %	change points	Yield gross %	xd adj ytd	Total rate (Euro) €
FTSE Eurotop 300	1215.91	-1.56	-19.23	2.24	0.11	1252.11
FTSE Eurotop 100	2823.00	-1.39	-39.92	2.27	0.18	1011.99
FTSE Ebloc 100	1029.22	-1.75	-18.37	2.02	0.00	1044.73
FTSE EuroMid	1171.65	-0.94	-11.16	2.86	0.13	1214.15
FTSE EuroMid Ebloc	1235.64	-1.07	-13.32	2.25	0.05	1261.85
FTSE EuroMid Ex UK	1253.62	-0.96	-12.46	2.17	0.04	1276.87
FTSE Eurotop 300 Regions						
Eurobloc	1284.67	-1.81	-23.70	1.98	0.00	1312.16
UK	1112.39	-1.63	-18.39	2.70	0.30	1168.28
Europe Ex-Eurobloc	1157.96	-1.28	-15.01	2.52	0.22	1199.80
Europe Ex-UK	1275.14	-1.52	-19.72	2.02	0.00	1299.00
FTSE Eurotop Industry Sectors						
RESOURCES	882.95	+0.57	+4.88	3.30	0.00	902.41
Mining	760.87	+3.61	+26.54	4.50	0.00	776.83
Oil & Gas	834.70	+0.46	+3.80	3.26	0.00	854.91
BASIC INDUSTRIES	1062.63	-1.44	-15.55	2.72	0.00	1085.23
Chemicals	823.72	-1.52	-12.72	2.72	0.00	838.26
Construction & Bld Matls	931.30	-1.69	-16.01	2.47	0.00	939.95
Forestry & Paper	914.42	-0.08	-0.71	3.37	0.00	956.23
GENERAL INDUSTRIALS	1107.64	-1.04	-11.64	2.48	0.13	1131.33
Aerospace & Defence	855.34	-0.90	-7.80	1.85	0.00	867.14
Diversified Industrials	1008.34	-1.81	-18.62	1.99	0.00	1031.41
Electronic & Elect Equip	995.36	-1.00	-10.03	1.83	0.00	1000.78
Engineering & Machinery	925.28	+0.09	+0.85	4.27	0.45	938.51
CYCLICAL CONS GOODS	1325.78	-1.76	-23.69	2.49	0.00	1362.26
Automobiles	987.71	-1.81	-18.22	2.35	0.00	996.87
Household Goods & Texts	1270.81	-1.45	-18.64	3.25	0.00	1281.86
NON-CYC CONS GOODS	1261.21	-1.88	-24.19	1.44	0.00	1295.91
Beverages	943.39	-4.01	-39.45	2.80	0.00	963.75
Food Producers & Process	973.91	-1.88	-18.68	1.58	0.00	985.36
Health	936.93	-1.01	-9.53	8.14	0.00	950.95
Packaging	755.75	-0.95	-7.25	1.19	0.00	756.89
Personal Care & Hse Prods	1093.83	-2.45	-27.43	0.88	0.00	1103.17
Pharmaceuticals	1151.26	-1.70	-19.95	1.10	0.00	1157.51
Tobacco	1439.33	-0.16	-2.28	3.26	0.00	1466.75
CYCLICAL SERVICES	1219.75	-1.87	-23.25	2.48	0.67	1256.12
Distributors	787.74	+2.83	+21.67	3.74	0.00	796.59
General Retailers	1041.69	-2.02	-21.52	2.99	1.06	1064.26
Leisure Entertmt & Hotels	833.24	-2.34	-19.97	2.41	6.02	850.57
Media & Photography	1057.20	-1.29	-13.83	2.16	0.00	1066.49
Rests, Pubs & Breweries	777.40	-5.20	-42.62	3.50	2.64	802.69
Support Services	1044.51	-1.98	-21.07	1.40	0.00	1055.59
Transport	918.07	-1.10	-10.23	2.67	0.00	935.00
NON-CYCLICAL SERVS	1292.23	-1.30	-17.08	1.55	0.00	1330.04
Food & Drug Retailers	1084.13	+0.71	+7.67	1.88	0.00	1100.68
Telecommunications Servs	1254.17	-1.80	-22.96	1.48	0.00	1272.85
UTILITIES	1516.89	-1.27	-19.53	2.89	0.02	1608.77
Electricity	1180.87	-0.63	-7.48	2.96	0.02	1218.89
Gas Distribution	1197.37	-3.45	-42.81	1.55	0.01	1318.38
Water	926.13	-1.17	-10.92	5.31	0.00	969.92
FINANCIALS	1299.29	-1.94	-25.68	2.52	0.00	1334.76
Banks	886.02	-1.88	-16.95	3.30	0.00	898.62
Insurance	1041.79	-1.67	-17.67	1.34	0.00	1054.36
Life Assurance	1198.38	-2.86	-35.03	1.83	0.00	1205.84
Investment Companies	1007.00	-1.92	-19.68	1.88	0.00	1031.15
Real Estate	662.99	-0.38	-2.52	3.58	0.00	680.22
Speciality & Other Fin	852.59	-3.40	-30.34	2.80	0.00	876.99
INFORMATION TECH	886.80	-2.77	-25.24	1.17	0.00	888.91
Information Tech Hardware	945.59	-1.91	-18.43	1.40	0.00	947.84
Software & Computer Serv	753.30	-5.12	-40.69	0.50	0.00	755.08

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CURRENCIES & MONEY

EURO SPOT FORWARD AGAINST THE EURO

Jan 12		Closing mid-point	Change on day	Bid/offer spread	Day's mid high	Day's mid low	One month Rate	One month %PA	Three months Rate	Three months %PA	One year Rate	One year %PA
Europe												
Czech Rep.	(Koruna)	35.4563	+0.2487	266 - 859	35.5070	35.1420	35.4110	1.5	35.6825	-2.6	36.9563	-4.2
Denmark	(DKr)	7.4431	+0.0002	391 - 470	7.4500	7.4354	7.4473	-0.7	7.4542	-0.6	7.4885	-0.6
Greece	(Dr)	323.952	+0.1640	812 - 091	324.910	322.844	326.1437	-8.1	329.9138	-7.4	344.9347	-6.5
Hungary	(Forint)	249.347	+0.0680	206 - 488	249.488	244.860	251.9631	-12.6	257.0657	-12.4	278.9611	-11.9
Norway	(NKr)	8.5929	+0.0358	881 - 976	8.6350	8.5460	8.5942	-0.2	8.6457	-2.5	8.8212	-2.7
Poland	(Zloty)	4.0732	+0.0138	672 - 792	4.0782	4.0290	-	-	-	-	-	-
Romania	(Leu)	12930.48	-18.1600	903 - 195	-	-	-	-	-	-	-	-
Russia	(Rouble)	26.8690	-0.3296	112 - 267	26.8323	26.4154	-	-	-	-	-	-
Slovakia	(Koruna)	42.5088	-0.0286	672 - 503	43.0700	42.4445	-	-	-	-	-	-
Sweden	(SKr)	9.0470	-0.0049	393 - 547	9.1200	9.0359	9.0535	-0.9	9.0568	-0.4	9.0865	-0.4
Switzerland	(SFr)	1.6055	-0.0065	045 - 064	1.6128	1.6000	1.6090	-2.6	1.6047	0.2	1.5888	1.0
UK	(£)	0.7079	+0.0046	075 - 083	0.7100	0.7020	0.7051	4.7	0.7078	0.1	0.7187	-1.5
Americas												
Argentina	(Peso)	1.1541	+0.0009	538 - 543	1.1552	1.1447	-	-	-	-	-	-
Brazil	(R$)	1.3978	+0.0024	974 - 981	1.3992	1.3864	-	-	-	-	-	-
Canada	(C$)	1.7401	+0.0013	391 - 410	1.7462	1.7208	1.7417	-1.1	1.7465	-1.5	1.7708	-1.8
Mexico	(New Peso)	11.6602	+0.1977	519 - 685	11.6765	11.5589	11.7536	-9.6	12.2250	-19.4	14.1093	-21.0
USA	($)	1.1543	+0.0009	540 - 545	1.1554	1.1449	1.1554	-1.1	1.1587	-1.5	1.1769	-2.0
Pacific/Middle East/Africa												
Australia	(A$)	1.7976	-0.0014	958 - 994	1.8101	1.7842	1.8017	-2.7	1.8082	-1.9	1.8314	-1.9
Hong Kong	(HK$)	8.9439	+0.0073	417 - 461	8.9477	8.8788	8.9563	-1.5	8.9940	-2.2	9.2839	-3.8
India	(Rs)	49.0585	+0.0260	392 - 778	49.1161	48.6548	49.2953	-5.8	49.9013	-6.8	53.7793	-9.6
Indonesia	(Rupiah)	9291.73	+122.1800	200 - 145	9260.00	9250.00	9491.40	-25.8	9979.49	-29.6	11681.30	-25.7
Israel	(Shk)	4.6842	+0.0037	773 - 911	4.6988	4.6373	-	-	-	-	-	-
Japan	(Y)	129.945	+2.9550	986 - 131	129.700	124.900	125.7453	30.7	125.1639	12.0	122.6288	5.0
Malaysia	(M$)	4.3862	+0.0033	662 - 689	4.3903	4.2562	-	-	-	-	-	-
New Zealand	(NZ$)	2.1084	+0.0019	062 - 106	2.1217	2.0985	2.1090	-0.3	2.1142	-1.1	2.1407	-1.9
Philippines	(Peso)	43.7461	+0.3205	635 - 287	43.9630	43.2200	43.8210	-2.1	44.5444	-7.3	48.0374	-9.8
Saudi Arabia	(SR)	4.3285	+0.0035	269 - 300	4.3331	4.2928	4.3380	-2.6	4.3652	-3.4	4.4881	-3.7
Singapore	(S$)	1.9380	+0.0083	370 - 390	1.9373	1.9217	1.9291	5.5	1.9264	2.4	1.9273	0.6
South Africa	(R)	6.9691	+0.0833	621 - 761	6.9761	6.8915	6.9735	-0.8	7.1072	-7.8	7.7532	-11.3
South Korea	(Won)	1354.51	+2.1500	249 - 654	1358.75	1352.49	-	-	-	-	-	-
Taiwan	(T$)	37.1584	+0.0810	473 - 714	37.1920	36.8070	37.1128	1.5	37.2433	-0.9	37.9531	-2.1
Thailand	(Bt)	42.0436	+0.2386	056 - 815	42.0815	41.3231	41.9953	3.9	42.1481	-1.0	43.7788	-4.1
UAE	(Dirham)	4.2395	+0.0031	383 - 406	4.3350	4.23040	4.2446	-1.4	4.2588	-1.8	4.3346	-2.2

Euro Locking Rates: Austrian Schilling 13.7603, Belgium/Luxembourg Franc 40.3399, Finnish Markka 5.94573, French Franc 6.55957, German Mark 1.95583, Irish Punt 0.787564, Italian Lira 1936.27, Netherlands Guilder 2.20371, Portuguese Escudo 200.482, Spanish Peseta 166.386. Bid/offer spreads in the Euro Spot table show only the last three decimal places. Bid, offer, mid spot rates and forward rates are derived from THE WM/REUTERS CLOSING SPOT and FORWARD RATE services. Some values are rounded by the F.T.

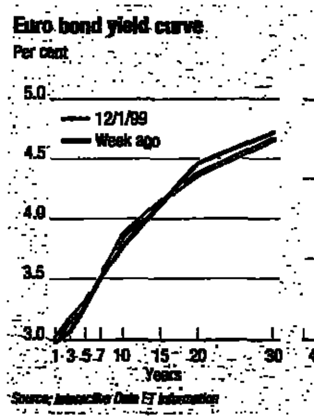
BONDS

INTEREST RATE SWAPS

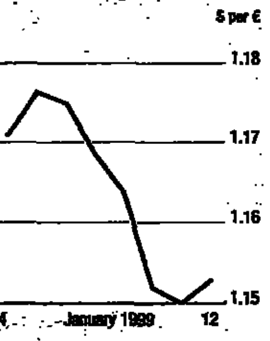
Jan 12	Euro-£ Bid	Euro-£ Ask	Euro-L Bid	Euro-L Ask	£ Stlg Bid	£ Stlg Ask	US $ Bid	US $ Ask	Yen Bid	Yen Ask
1 year	3.10	3.13	3.10	3.13	5.42	5.45	5.11	5.14	0.54	0.57
2 year	3.12	3.17	3.12	3.16	5.17	5.20	5.18	5.21	0.67	0.70
3 year	3.23	3.27	3.23	3.27	5.16	5.20	5.24	5.27	0.90	0.93
4 year	3.35	3.39	3.35	3.39	5.17	5.21	5.31	5.34	1.11	1.14
5 year	3.49	3.53	3.49	3.53	5.17	5.21	5.34	5.37	1.32	1.35
6 year	3.64	3.68	3.64	3.68	5.17	5.21	5.39	5.42	1.52	1.55
7 year	3.78	3.82	3.78	3.82	5.18	5.22	5.45	5.48	1.70	1.73
8 year	3.91	3.95	3.91	3.95	5.19	5.23	5.51	5.54	1.85	1.88
9 year	4.03	4.07	4.03	4.07	5.19	5.23	5.57	5.60	1.98	2.01
10 year	4.12	4.16	4.12	4.16	5.20	5.24	5.61	5.64	2.09	2.12
12 year	4.28	4.32	4.28	4.32	5.21	5.26	5.68	5.71	2.30	2.33
15 year	4.46	4.50	4.46	4.50	5.22	5.28	5.80	5.83	2.55	2.58
20 year	4.65	4.69	4.65	4.69	5.23	5.30	5.88	5.91	2.77	2.81
25 year	4.75	4.79	4.75	4.79	5.24	5.31	5.89	5.92	2.82	2.86
30 year	4.82	4.86	4.82	4.86	5.24	5.32	5.90	5.93	2.89	2.93

Bid and ask rates as of close of London business. US $ is quoted annual money actual/360 basis against 3 months Libor, £ and Yen quoted on a semi-annual actual/365 basis against 6 months Libor. Euro quoted on annual bond 30/360 basis against 6 month Euribor and Libor with the exception of the 1 year rate which is quoted against 3 months Euribor and Libor. Source: Intercapital Brokers Ltd.

Euro bond yield curve



Euro against the dollar



Source: Interactive Data/FT Information

EURO-ZONE BONDS

Jan 12	Red date	Coupon	S & P Rating	Bid price	Bid yield	Day's chge yld	Mth's chge yld	Sprd v Govts
■ SOVEREIGNS								
UK	01/01	4.250	AAA	102.130	3.15	-0.02	-0.22	+0.14
Denmark	01/02	4.750	AA+	104.198	3.25	-0.02	-0.12	+0.17
Sweden	02/01	5.000	AA+	103.585	3.18	-0.02	+0.08	+0.17
Greece	11/06	6.750	BBB	115.845	4.32	+0.06	-0.14	+0.83
■ SUPRANATIONALS								
ADB	10/07	5.500	AAA	109.614	4.17	+0.02	-0.12	+0.58
EIB	04/08	5.000	AAA	108.772	3.85	-0.03	-0.11	+0.17
Eurofima	12/09	5.625	AAA	111.427	4.29	-0.03	-0.10	+0.52
World Bank	04/05	7.125	AAA	118.523	3.74	-0.03	+0.19	+0.35
■ UTILITIES								
EDF	10/03	3.750	n/a	101.363	3.43	-0.03	-0.04	+0.25
TEPCO	02/03	4.750	AA	103.688	3.76	-0.03	+0.13	+0.58
Quebec Hydro	03/08	5.375	A+	106.441	4.50	-0.03	-0.07	+0.82
Norsk Hydro	10/99	7.250	n/a	102.553	3.55	-0.04	+0.12	+0.59
■ FINANCIALS								
Bad Wurtt	02/10	5.375	AAA	108.973	4.34	+0.06	+0.05	+0.50
OKB	09/07	5.750	AAA	112.551	4.00	+0.03	-0.15	+0.41
Credit Local	04/08	5.250	AA+	107.655	4.23	+0.06	-0.04	+0.55
Abbey Natl	01/09	5.000	AA-	103.213	4.59	-0.01	-0.19	+0.82
■ INDUSTRIALS								
Unilever	10/01	5.125	AAA	104.474	3.38	+0.07	-0.07	+0.37
McDonalds	03/08	5.125	AA	109.569	3.87	-0.03	-0.10	+0.19
Philip Morris	06/08	5.625	A	106.369	4.77	-0.05	-0.31	+1.09
BAT Int Fin	07/06	5.375	A-	102.995	4.89	-0.24	-0.02	+1.40
■ PFANDBRIEFE								
Rhein Hypo	12/01	5.500	n/a	105.730	3.37	+0.03	-0.06	+0.36
FHC	01/04	5.000	n/a	106.270	3.60	+0.04	-0.05	+0.31
Bayer Vereins	01/06	6.000	n/a	112.963	3.85	+0.05	-0.06	+0.36
Depfa	07/08	4.750	n/a	104.560	4.16	+0.06	-0.05	+0.48
■ HIGH YIELD								
Gebenit	04/07	10.125	n/a	109.234	8.21	-0.06	-0.17	+4.62
Colt Telecom	11/07	8.875	n/a	101.686	8.60	+0.07	+0.23	+5.01
Impress Metal	05/07	9.875	B	109.250	7.99	+0.05	-0.03	+4.40
Remy Cointreau	07/05	10.000	B+	93.000	11.55	+0.42	-1.18	+8.16

Standard & Poor's ratings. Source: Interactive Data/FT Information.

FTSE EUROTOP 300

Name	Price (Euro)	Chge + or -	Mkt cap Euro(bn)	Vol (m)	Yld
[illegible]					

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Notes: [illegible]

Treasuries lead Europe higher

BENCHMARK BONDS

By Arkady Ostrovsky in London and John Labate in New York

Most bond markets closed higher yesterday after the surge of the Japanese yen against the US dollar was brought to a halt by the reported intervention of the Bank of Japan.

The yen-dollar exchange rate regained some balance at about Y112 to the dollar, which sent bond prices up as fears subsided – at least for the moment – of a big repatriation of funds from the US by Japanese investors.

The 30-year Treasury jumped by more than a point in early trading, prompting European markets to follow suit. The German bund future rose 0.77 to 116.75. Analysts said German data showing a worse-than-expected 2.3 per cent slide in industrial output in November were all but ignored by the market.

James Mitchell at Nomura said markets had been more concerned lately with larger global events such as volatility in the dollar-yen exchange rate and the troubles in Brazil than with national economic data in euro-zone countries.

The Brazilian bond market continued to tumble with the benchmark C bond dropping almost 2 points to 54.75, sparking new fears of a devaluation of the currency. Mr Mitchell said a 90-day moratorium on federal debt repayments declared by the state of Minas Gerais suggested regional governors in Brazil were less concerned than the federal government with fiscal reform.

"The issue is not the size of debt, but whether the fiscal plan agreed with the IMF last year will make the grade at state level," said Richard Gray at Bank of America.

The UK 10-year gilt future fell 0.51 to 118.73. Andrew Roberts at Merrill Lynch said the market was not pricing in the potential downside in the market from the increasing supply of UK corporate bonds and the possibility of a soft landing for the economy.

The Dutch State Treasury yesterday raised €2.5bn in its first euro-denominated bond issue. The 10-year bonds have a coupon of 3.75 per cent and were priced to give an average yield of 3.98 per cent. The issue was the first test for the Dutch primary dealership system launched last year to widen the investor base for Dutch bonds.

Leo Verwoerd, head of the Dutch debt management office, said the issue, which was priced at 2-3 basis points above market prices, had attracted many overseas investors and was the first step in reducing the yield gap between the Netherlands and other AAA-rated countries such as France and Germany. "We will not be satisfied until we are the same level as the benchmark [Germany]," he added.

Analysts said this was unlikely to happen in the immediate future, as investors still demanded a premium for markets with low liquidity.

In the US, Treasuries rallied in midday trade. The 30-year bond was 1¼ up at 100$\frac{25}{32}$ to yield 5.218 per cent. Two-year notes climbed $\frac{3}{32}$ to 99$\frac{31}{32}$, yielding 4.641 per cent, and 10-year notes gained $\frac{11}{32}$ to 99¾, yielding 4.814 per cent.

A series of economic reports will be released this week, starting today with producer prices. New data on consumer prices, retail sales and industrial production will follow.

Jumbo issues take the lead

NEW ISSUES

By Khozem Merchant

Jumbo issues dominated activity. Freddie Mac, the triple A rated US home loan lender, offered a five-year $3bn bond, while Morgan Stanley Dean Witter issued a $2bn global bond, also of five-year maturity.

The self-arranged MSDW bond was priced to yield 105 basis points over five-year US Treasuries, a slightly generous pricing that tightened by two basis points.

The MSDW bond was one of several aimed at investors beyond traditional arenas. More than half was bought by investors outside the US.

This broadening of investor profiles is one consequence of the euro, which has encouraged Asian investors, for instance, to snap up euro-denominated paper, and European investors to go down the yield curve in search of higher yield among lower-rated credits.

ING Bank made its debut in the euro-denominated market with its largest ever bond, again pitched at non-traditional investors outside the Low Countries.

The €1bn bond was the latest take-up in the bank's recently revised €14bn medium-term programme.

Take-up on the 10-year bond was strong, evidence of the healthy demand for long-dated bonds, particularly from foreign institutions looking for higher yield.

The appetite for bonds at the long end of the yield curve is being driven by an environment of low and falling interest rates, which generally benefits longer-dated paper.

The bond was priced to yield 60 basis points over the new 2009 bund and traded unchanged.

Northern Rock also managed to recast itself among investors, launching its first bond in three years and the first since it swapped mutual status to become a quoted bank. Northern Rock was for decades a pillar of the north-east England home lending market – and hardly a familiar name with continental European investors.

Its £250m floating rate note, part of a $5bn medium-term note programme, was designed to redress the imbalance. Investors from Germany, Ireland and the Benelux countries were among those who bought the issue. It was priced to yield a spread of Libor plus 14 basis points and was trading unchanged.

New international bond issues

Borrower	Amount m.	Coupon %	Price	Maturity	Fees %	Spread bp	Book-runner
US DOLLARS							
Freddie Mac	3bn	(a)#	(a)R	Jan 2004	0.10R	(a)(4¾%Nov03)	Goldman/JPM/Salomon
Morgan Stanley DW	2bn	5.625#	99.545R	Jan 2004	0.35R	+105(Nov03)	Morgan Stanley DW
European Investment Bank	500	5.25	99.705R	Feb 2006	0.30R	+48(4¾%Nov03)	Warburg Dillon Read
Amex Travel Services Co	500	5.625	99.551R	Jan 2004	0.30R	+95(4¾%Nov03)	JP Morgan Securities
Mitsubishi AOT 99-1(b)★‡	411.98	-	-	-	-	-	Merrill Lynch
New Zealand	300.	5.25	99.70R	Jan 2004	0.25R	+50(4¾%Nov03)	Morgan Stanley DW
Canada	300	5.125	99.997R	Jan 2002	0.1875R	+32(4¾%Dec00)	Morgan Stanley DW
Dresdner Finance(c)	250	5.50	99.403R	Jan 2004	0.25R	+81(4¾%Nov03)	Bear Stearns/Dresdner
Rabobank Nederland(d)	100	(d1)	99.90R	Jan 2009	0.25R	-	Barclays Capital
EUROS(e)							
Allgemeine Hypobank(p)	1bn	4.25	98.82R	Jan 2014	0.20R	+74(3¾%Jan09)	ABN Amro and six others
ING Bank	1bn	4.25	98.87R	Jan 2009	0.35R	+60(3¾%Jan09)	ING Barings-BBL
CCCIF(f)‡	550	(f1)	99.91R	Nov 2000	0.05R	-	CAI/DG Bank
Principal Fin Global Fndg	300	4.50	98.954R	Jan 2009	0.375R	+85(3¾%Jan09)	CSFB
CCF‡	300	(g)	100.004	Feb 2001	0.08	-	CCF
STERLING							
Northern Rock plc‡	250	(h)	99.824R	Jan 2004	0.15R	-	Barclays Capital
YEN							
Nidec Corp(j,s)§	10bn	(⅛-⅜)#	100.00	Mar 2003	2.50	-	Tokyo-Mitsubishi Intl
SWISS FRANCS							
Rabobank Nederland	200	2.50	101.625	Feb 2006	2.50	-	Bqe Paribas(Suisse)
GREEK DRACHMA							
Abbey Natl Trsy Services	15bn	6.50	100.075R	Jan 2002	0.20R	-	Morgan Stanley DW

Final terms, non-callable unless stated. Yield spread (over relevant government bond) at launch supplied by lead manager. ★Unlisted. §Convertible. ‡ Floating-rate note. #Semi-annual coupon. R: fixed re-offer price; fees shown at re-offer level. a) Priced later around 48bp over Treasuries. b) Auto Owners Trust. 4-tranche asset-backed. c) $500m launched 6/1/99 was increased to $750m. d) Callable annually at par. d1) 6.86% to 26/2/00, then 6%. e) Spread relates to German govt bonds unless stated. f) Fungible with €520m. Plus 0.6697% accrued. f1) Eonia +12½bp. g) Eonia +13bp. h) 3-mth Libor +10bp. j) Fixing: 20/1/99. s) Short 1st coupon.

Elevator group pays $200,000 settlement

By Nikki Tait in Chicago

Andersons, one of the main grain elevator companies in the Toledo, Ohio, area, has agreed to pay $200,000 to settle a dispute over customised agricultural futures contracts with the Commodity Futures Trading Commission, the US futures industry regulator.

The settlement is one of the largest in the long-running fracas over "hedge-to-arrive" contracts. The use of customised agricultural derivatives was banned in the 1930s in the US because of problems with fraud and other abuses.

But, in the mid-1990s, some participants in the nation's grain industry began to develop private forward contracts, known as "HTA contracts", requiring physical delivery at a set price with the date variable.

When grain prices surged, losses running into hundreds of millions of dollars resulted, and the legality of these contracts was questioned. The CFTC has brought complaints against a number of participants, and also settled with some.

The regulator says the Andersons' contracts involved "the purchase or sale of a commodity for delivery in the future at a price or pricing formula agreed when the contract was initiated", and was designed to shift price risk – and thus amounted to illegal futures contracts.

However one commissioner dissented, pointing out they were only offered to commercial counterparties and that they did include a contractual obligation to deliver.

Andersons did not admit or deny the findings.

SECURITIES BANK EYES PRIVATE INVESTORS

Japan to sell holdings of financing bills

By Gillian Tett in Tokyo

The Bank of Japan plans to start selling off its Y20,000bn ($183bn) holdings of financing bills, short-term government securities, to private investors for the first time next month.

The decision has been set off partly by government plans to liberalise the Y30,000bn FB market, which has hitherto been dominated by the bank and other government institutions.

However the planned sales have also been triggered by the bank's growing unease about the recent increase in its balance sheet. This surged to Y91,000bn in December, an annual increase of 27 per cent.

Government officials insist that the sales of FBs are unlikely to raise short-term interest rates too sharply since they believe there is strong demand among private investors for these FBs.

Nevertheless, some traders fear the bank's sales could fuel oversupply problems in the overall government securities markets, particularly if the bank encourages investors to purchase FBs at the expense of other instruments, such as Japanese government bonds.

The bank's sales are likely to be closely watched by the market because the bank is conducting an intensive internal debate about the degree to which it should hold government securities on its balance sheet.

The bank's role in the government securities market has become particularly important because the Trust Fund Bureau, a state institution, has recently decided to stop most purchases of Japanese government bonds.

The Bureau's stance has pushed yields sharply higher in recent weeks, since it has traditionally absorbed a large proportion of JGBs, and the government plans to raise its issuance sharply.

Some government officials and politicians have consequently suggested that the bank should purchase more JGBs itself to plug this gap – and thus reduce yields. However, the bank is reluctant to raise its JGB holdings, which stand at Y50,000bn. Instead, most senior officials want to reduce the bank's balance sheet to make it more liquid and transparent.

In the longer term, officials hope this aim will leave the bank holding fewer JGBs but more short-term government securities, such as Treasury Bills and FBs.

However, in the short term, the bank has decided to start selling its holding of FBs because it recognises that the FB market is one of the most illiquid and distorted in Japan.

At present, the interest rate on FBs is set by the Ministry of Finance at 0.125 per cent, well below market levels. Consequently, private investors have shunned the market, forcing the bank to buy most FBs at a loss.

However, in April the government will start conducting open FB auctions for the first time. This move is likely to push the interest rate up sharply and could attract private investors for the first time.

WORLD BOND PRICES

BENCHMARK GOVERNMENT BONDS

Jan 12	Red Date	Coupon	Bid Price	Bid Yield	Day chg yield	Wk chg yield	Month chg yld	Year chg yld
Australia	01/01	8.750	107.1324	4.94	+0.08	+0.29	+0.56	-0.07
	08/08	8.750	124.7162	5.41	+0.06	+0.35	+0.65	-0.13
Austria	07/00	5.875	103.9900	3.09	-0.05	-0.11	-0.13	-1.06
	01/08	5.000	107.8300	3.95	-0.01	+0.02	-0.03	-1.21
Belgium	01/00	4.000	100.9500	3.03	-0.01	-0.06	-0.11	-1.03
	03/08	5.750	113.2600	3.99	-0.02	+0.02	-0.04	-1.15
Canada	12/00	5.000	100.3909	4.78	-0.04	+0.06	+0.08	+0.08
	06/08	6.000	107.1000	5.04	-0.02	+0.09	+0.16	-0.21
Denmark	11/00	9.000	108.4900	3.52	-	-0.19	-0.42	-0.67
	11/07	7.000	120.9400	4.12	-0.02	+0.04	-0.10	-1.22
Finland	06/00	4.000	101.2900	3.08	+0.01	-0.05	+0.38	-0.66
	04/08	6.000	115.4700	3.97	-0.01	+0.06	-0.01	-1.16
France	07/00	4.000	101.3800	3.02	-0.02	-0.08	-0.11	-0.96
	10/05	7.750	124.9369	3.54	-0.01	+0.03	+0.02	-1.20
	10/08	8.500	137.3300	3.84	-0.02	+0.07	-0.01	-1.23
	04/29	5.500	112.6000	4.71	-	+0.06	+0.05	-0.91
Germany	06/00	4.000	101.3400	3.00	-0.03	-0.06	-0.15	-0.88
	10/05	6.500	116.9000	3.62	-0.03	+0.02	-0.02	-1.20
	07/08	4.750	107.3100	3.61	-0.03	+0.02	+0.02	-1.25
	01/28	5.625	114.1500	4.72	-	+0.06	+0.06	-0.91
Greece	03/00	9.800	99.6047	10.11	+0.10	+0.05	-0.01	-5.52
	03/08	8.600	113.6696	6.56	+0.04	+0.24	-0.67	-4.32
Ireland	10/01	6.500	108.6600	3.17	-	-0.02	-0.12	-1.50
	08/06	6.000	115.6300	4.00	-0.01	+0.08	+0.02	-1.32
Italy	04/01	4.500	102.8900	3.14	+0.01	-0.03	-0.12	-1.55
	07/03	4.500	104.5800	3.39	-	-	-0.03	-1.51
	05/08	5.000	108.0200	3.98	-0.01	+0.07	+0.03	-1.37
	11/27	6.500	125.7000	4.84	+0.01	+0.10	+0.02	-0.97
Japan	12/00	6.900	111.8890	0.65	-	-0.09	+0.13	+0.10
	12/03	4.100	113.4020	1.28	+0.01	-0.16	+0.39	+0.09
	06/08	1.800	100.2900	1.77	+0.02	-0.15	+0.57	+0.13
	03/18	2.700	102.4710	2.54	+0.02	-0.15	+0.53	+0.07
Netherlands	05/00	9.000	107.0400	3.00	-0.07	-0.08	-0.16	-1.04
	07/08	5.250	110.4600	3.91	-0.03	+0.04	+0.01	-1.11
New Zealand	02/01	8.000	105.3276	5.22	+0.01	+0.07	+0.41	-2.33
	07/09	7.000	110.0016	5.72	+0.06	+0.23	+0.49	-0.94
Norway	05/01	7.000	103.3000	5.45	-0.03	-0.17	-2.11	+1.23
	01/07	6.750	110.7000	5.09	-0.01	-0.08	-0.11	-0.17
Portugal	03/00	5.375	102.5200	3.15	-0.01	-0.04	-0.07	-1.29
	06/08	5.375	110.7500	3.98	-0.02	-0.08	-0.10	-1.40
Spain	04/00	8.750	104.4300	3.03	-0.01	-0.02	-0.08	-1.43
	01/08	6.000	115.1700	3.97	-0.02	+0.07	-0.05	-1.36
Sweden	05/00	10.250	108.4709	3.42	+0.02	-0.05	-0.04	-1.38
	05/08	6.500	118.2760	4.09	-0.01	+0.07	-0.07	-1.50
Switzerland	06/00	4.500	104.2300	1.40	-0.02	-0.09	+0.07	-0.21
	01/08	4.250	115.0500	2.37	-0.01	+0.07	+0.21	-0.72
UK	11/01	7.000	108.1500	4.64	+0.05	-0.10	-0.11	-1.83
	12/03	6.500	109.4800	4.33	+0.07	-0.04	-0.08	-1.71
	10/08	9.000	136.5400	4.36	+0.08	+0.04	-0.08	-1.60
	12/28	6.000	126.2100	4.41	+0.09	+0.14	+0.07	-1.53
US	09/00	4.500	99.5011	4.75	-0.04	+0.08	+0.25	-0.48
	09/03	5.250	101.8654	4.79	-0.07	+0.09	+0.31	-0.67
	05/08	5.625	104.9072	4.88	-	+0.15	+0.27	-0.42
	08/28	5.500	102.2108	5.35	-0.04	+0.05	+0.21	-0.40

London closing. * New York mid-day. Source: Interactive Data/FT Information. Yields: Local market standard Annualised yield basis. Yields shown for Italy exclude withholding tax at 12.5 per cent payable by nonresidents.

10 YEAR BENCHMARK SPREADS

Jan 12	Bid Yield	Spread vs Euros	Spread vs T-Bonds		Bid Yield	Spread vs Euros	Spread vs T-Bonds
Australia	5.42	+1.65	+0.56	Netherlands	3.94	+0.17	-0.92
Austria	4.07	+0.30	-0.79	New Zealand	5.73	+1.96	+0.87
Belgium	4.08	+0.31	-0.78	Norway	5.11	+1.34	+0.25
Canada	5.04	+1.27	+0.18	Portugal	4.05	+0.28	-0.81
Denmark	4.14	+0.37	-0.72	Spain	4.08	+0.31	-0.78
Finland	4.00	+0.23	-0.86	Sweden	4.11	+0.34	-0.75
France	3.84	+0.07	-1.02	Switzerland	2.47	-1.30	-2.39
Germany	3.77	-	-1.09	UK	4.35	+0.58	-0.51
Greece	6.51	+2.74	+1.65	US	4.86	+1.09	-
Ireland	4.04	+0.27	-0.82				
Italy	3.94	+0.17	-0.92				
Japan	1.78	-1.99	-3.08				

Source: Interactive Data/FT Information. London closing. * New York closing. Annualised yield basis.

EMERGING MARKET BONDS

Jan 12	Red date	Coupon	S & P Rating	Bid price	Bid yield	Day's chge yld	Mth's chge yld	Sprd vs US
EUROPE								
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LATIN AMERICA								
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ASIA								
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AFRICA/MIDDLE EAST								
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BRADY BONDS								
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Source: Interactive Data/FT Information.

BOND FUTURES AND OPTIONS

France

NOTIONAL EURO BOND FUTURES (MATIF) €100,000

	Open	Sett price	Change	High	Low	Est. vol.	Open int.
Mar	111.95	111.95	-0.01	112.01	111.57	34,912	91,148

LONG TERM EURO BOND OPTIONS (MATIF)

Strike Price	Calls Feb	Calls Mar	Puts Feb	Puts Mar
110	2.01	2.23	0.08	0.29
111	1.15	1.48	0.20	0.54
112	0.50	0.89	0.55	0.94
113	0.16	0.49	1.21	1.53

Germany

NOTIONAL GERMAN BUND FUTURES (DTB) DM250,000 100ths of 100%: [illegible]

BUND FUTURES OPTIONS (LIFFE) DM250,000 points of 100%: [illegible]

NOTIONAL GERMAN BOND (BOBL) FUTURES (DTB) DM250,000 100ths of 100%: [illegible]

NOTIONAL LFE SWAP FUTURES (LIFFE): [illegible]

Italy

NOTIONAL ITALIAN GOVT. BOND (BTP) FUTURES (LIFFE)* Lire 200m 100ths of 100%: [illegible]

ITALIAN GOVT. BOND (BTP) FUTURES OPTIONS (LIFFE) Lire200m 100ths of 100%: [illegible]

Spain

NOTIONAL SPANISH BOND FUTURES (MEFF) €100,000: [illegible]

UK

NOTIONAL UK GILT FUTURES (LIFFE)* £100,000 100ths of 100%: [illegible]

LONG GILT FUTURES OPTIONS (LIFFE) £100,000 100ths of 100%: [illegible]

US

US TREASURY BOND FUTURES (CBT) $100,000 32nds of 100%: [illegible]

Japan

NOTIONAL LONG TERM JAPANESE GOVT. BOND FUTURES (LIFFE) Y100m 100ths of 100%: [illegible]

Euro

EURO BOND FUTURES (MATIF) €100,000

	Open	Sett price	Change	High	Low	Est. vol.	Open int.
Mar	110.65	110.85	-0.35	110.85	110.65	75	235

US CORPORATE BONDS

[illegible]

US INTEREST RATES

[illegible]

INTERNATIONAL BONDS

Jan 12	Red date	Coupon	S & P Rating	Bid price	Bid yld	Day's chge yld	Mth's chge yld	Spread v Govts
EURO $								
EIB	04/07	7.250	AAA	111.0681	5.54	-0.04	+0.42	[illegible]
ABN Amro	06/07	7.125	AA-	104.0894	6.47	-0.05	+0.30	+1.87
Quebec	01/07	7.000	A+	106.1713	6.02	-0.04	+0.38	+1.22
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

UK BONDS

FTSE Actuaries Government Securities / UK Indices

[illegible]

UK GILTS PRICES

[illegible]

هكذا من الاصل

Japanese make timely intervention

MARKETS REPORT

By Alan Beattie

An intervention by the Bank of Japan which may prove to have lasting repercussions pushed the yen down sharply against the dollar yesterday.

It was the first time that the Japanese authorities are known to have intervened in the foreign exchange markets to support the dollar since 1995.

Although there was no formal confirmation of the action from the Bank of Japan or the Ministry of Finance, market counterparties privately confirmed that there had been substantial purchases of dollars.

The first bout of dollar buying was believed to be early in the Asian session, and knocked the yen sharply lower from around Y108 to Y111. The second came at the end of Asian trading, and dealt another firm blow to the yen, pushing it down to Y112.5.

The currency then stayed around this level for the remainder of London trading, closing at Y111.8.

Traders estimated that the Bank of Japan bought a total of between $1-$3bn, a relatively small intervention compared with the large sums spent last spring to support the yen.

"The intervention was effective for two reasons," said Robert Lynch, currency strategist at Paribas in New York. "First, the markets were caught somewhat by surprise." Many traders had not expected the Bank of Japan to act until the Y105 level was breached.

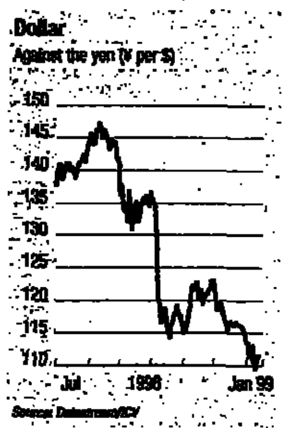
"Second, the market was expecting a further weakening in the dollar," he added. Mr Lynch said that the risk-reversals for dollar/yen showed that the market was heavily on the side of the dollar's slide continuing.

The thin market was also cited as a reason for the conspicuous success of a relatively small intervention.

Analysts said that the key behind the move was the desire to stop the yen's climb accelerating towards Y100.

"Movements in the yen often gain a momentum of their own," said Tony Norfield, currency strategist at ABN-Amro in London.

"Once the yen starts appreciating, capital outflows slow further as Japanese investors start worrying that their external assets will be worth less in yen terms. At a time when the country needs to recycle a huge current account deficit each month, this creates further yen strength and so a vicious circle is set up," he said.



Mr Norfield added that the aim of the intervention was to "get the ball rolling the other way," providing a floor for the dollar to encourage capital expatriation and support Japanese exporters.

Assuming that the Bank of Japan manages to keep the yen below Y110, many strategists believe that it could keep in a fairly narrow range in the near future.

Many exporters and life assurance firms with assets abroad are believed to be lying in wait to sell dollars around the Y115 level, which may prevent a rapid movement the other way.

But in the longer term, unless Japanese investors regain their risk appetite, there appears no particular reason that the yen cannot revisit the highs above Y110.

The decision to intervene has revealed apparent confusion between key ministers in the Japanese government. Eisuke Sakakibara, the vice minister for international affairs at the ministry of finance known as "Mr Yen" for his influence over the foreign exchange market in Japan, unexpectedly expressed satisfaction at the level of the yen last week, contributing to its rise.

But following Monday's comments by his ministerial colleague Koji Tanami that the strength of the yen was undesirable, this view has been disowned. Mr Sakakibara appeared to perform an about-turn yesterday, saying that excessive yen strength was as bad as excessive yen weakness.

Ministers stopped short of an official admission of intervention. The closest to it were the cryptic comments of Kiichi Miyazawa, the finance minister.

Although he declined to comment directly on intervention, his reported remarks were that he left it to government experts to deliver stability in the yen. Recent movements in the currency had been "a bit rapid", he added.

POUND IN NEW YORK

Jan 12	—Latest—	— Prev. close —
£ spot	1.6305	1.6290
1 mth	1.6289	1.6275
3 mth	1.6375	1.6259
1 yr	1.6374	1.6264

OTHER CURRENCIES

Jan 12	£	$
Czech Rp	50.0394 - 50.1320	30.6980 - 30.7370
Hungary	351.999 - 352.459	215.950 - 216.100
Iran	4883.00 - 4890.00	3000.00 - 3000.00
Kuwait	0.4926 - 0.4932	0.3022 - 0.3024
Peru	5.2144 - 5.2225	3.1990 - 3.2020
Poland	5.7448 - 5.7628	3.5244 - 3.5333
Russia	37.5978 - 37.7577	23.0600 - 23.1500
U.A.E.	5.9865 - 5.9908	3.6727 - 3.6731

POUND SPOT FORWARD AGAINST THE POUND

Jan 12		Closing mid-point	Change on day	Bid/offer spread	Day's Mid high	Day's Mid low	One month Rate	One month %PA	Three months Rate	Three months %PA	One year Rate	One year %PA	Bank of Eng. Index
Europe													
Austria*	(Sch)	19.4379	-0.1289	277 - 480	19.5816	19.4163	19.3882	3.1	19.3137	2.8	19.0191	2.2	103.2
Belgium*	(BFr)	56.9844	-0.3778	545 - 142	57.4050	56.9200	56.8385	3.1	56.6203	2.8	55.7665	2.2	103.2
Denmark	(DKr)	10.5141	-0.0695	076 - 206	10.5880	10.5067	10.493	2.4	10.4833	1.9	10.3515	1.5	106.5
Finland*	(FM)	8.3980	-0.0557	946 - 034	8.4610	8.3900	8.3775	3.1	8.3453	2.6	8.218	2.2	82.1
France*	(FFr)	9.2661	-0.0614	612 - 709	9.3347	9.2557	9.2424	3.1	9.2080	2.6	9.0685	2.2	106.7
Germany*	(DM)	2.7629	-0.0182	614 - 643	2.7681	2.7614	2.7558	3.1	2.7452	2.6	2.7034	2.2	104.5
Greece	(Dr)	457.616	-2.8010	378 - 854	459.942	457.205	459.762	-5.6	463.449	-5.1	477.484	-4.3	82.7
Ireland*	(I£)	1.1125	-0.0074	119 - 131	1.1207	1.1113	1.1097	3.1	1.1054	2.6	1.0886	2.2	95.2
Italy*	(L)	2735.19	-18.1300	378 - 662	2755.43	2732.15	2728.18	3.1	2717.71	2.6	2676.25	2.2	76.0
Luxembourg*	(LFr)	56.9844	-0.3778	546 - 142	57.4050	56.9200	56.8385	3.1	56.6203	2.6	55.7585	2.2	103.2
Netherlands*	(Fl)	3.1130	-0.0207	113 - 146	3.1380	3.1096	3.105	3.1	3.0931	2.6	3.0459	2.2	102.7
Norway	(NKr)	12.1383	-0.0298	305 - 461	12.2078	12.0945	12.1587	-2.0	12.1888	-1.7	12.266	-1.1	93.5
Portugal*	(Es)	283.202	-1.8770	054 - 350	285.293	282.891	282.477	3.1	281.392	2.8	277.088	2.2	92.6
Spain*	(Pta)	235.038	-1.5580	915 - 161	236.790	234.770	234.436	3.1	233.536	2.8	229.973	2.2	77.2
Sweden	(SKr)	12.7799	-0.0916	678 - 919	12.8961	12.7678	12.7489	2.9	12.7049	2.3	12.5995	1.7	82.1
Switzerland	(SFr)	2.2679	-0.0243	664 - 694	2.2888	2.2661	2.258	5.3	2.2431	4.4	2.1858	3.6	107.7
UK	(£)	-	-	-	-	-	-	-	-	-	-	-	98.6
Euro	(€)	1.4126	-0.0084	119 - 133	1.4133	1.4000	1.409	3.1	1.4036	2.6	1.3822	2.2	-
SDR†	-	1.163510	-	-	-	-	-	-	-	-	-	-	-
Americas													
Argentina	(Peso)	1.6302	-0.0096	297 - 307	1.6327	1.6235	-	-	-	-	-	-	-
Brazil	(R$)	1.9745	-0.0097	738 - 751	1.9772	1.9661	-	-	-	-	-	-	-
Canada	(C$)	2.4580	-0.0145	564 - 595	2.4657	2.4462	2.4557	1.1	2.4531	0.8	2.4487	0.4	77.3
Mexico	(New Peso)	16.4713	+0.1720	581 - 845	16.4845	16.1638	16.8599	-28.3	17.5481	-26.0	20.2857	-23.0	-
USA	($)	1.6305	-0.0096	300 - 310	1.6338	1.6238	1.629	1.1	1.6275	0.7	1.6275	0.2	103.8
Pacific/Middle East/Africa													
Australia	(A$)	2.5394	-0.0187	366 - 421	2.5604	2.5303	2.5365	1.4	2.5331	1.0	2.5304	0.4	79.6
Hong Kong	(HK$)	12.6342	-0.0734	299 - 385	12.6517	12.5812	12.6281	0.6	12.6341	0.0	12.8469	-1.7	-
India	(Rs)	69.3004	-0.4223	669 - 338	69.3430	69.0150	69.4881	-3.3	70.074	-4.5	74.3524	-7.3	-
Indonesia	(Rupiah)	13125.55	+66.7300	000 - 110	13211.1	12996.90	13512.39	-35.4	14248.37	-34.2	16882.01	-27.1	-
Israel	(Shk)	6.6169	-0.0387	066 - 272	6.6297	6.6090	-	-	-	-	-	-	-
Japan	(Y)	182.290	+2.9940	153 - 427	183.960	177.210	181.335	6.3	179.82	5.4	173.455	4.8	136.2
Malaysia	(M$‡)	6.1959	-0.0365	509 - 583	6.2051	6.1708	-	-	-	-	-	-	-
New Zealand	(NZ$)	2.9784	-0.0170	750 - 817	3.0007	2.9734	2.974	1.8	2.9697	1.2	2.9721	0.2	-
Philippines	(Peso)	61.7961	+0.0462	325 - 596	62.0596	61.6458	62.2205	-8.2	62.9258	-7.3	66.6066	-7.8	-
Saudi Arabia	(SR)	6.1144	-0.0357	117 - 171	6.1229	6.0884	6.1168	-0.5	6.1319	-1.1	6.2065	-1.5	-
Singapore	(S$)	2.7377	-0.0062	360 - 393	2.7534	2.7227	2.7285	4.0	2.7138	3.5	2.6716	2.4	-
South Africa	(R)	9.8445	+0.0532	338 - 553	9.8553	9.7184	9.9461	-12.4	10.1069	-10.7	10.8782	-10.5	-
South Korea	(Won)	1913.39	-9.6300	036 - 643	1917.47	1900.70	-	-	-	-	-	-	-
Taiwan	(T$)	52.4915	-0.2328	697 - 133	52.5863	52.2815	52.4669	0.6	52.5154	-0.2	52.8344	-0.7	-
Thailand	(Bt)	59.3910	-0.0545	320 - 500	59.4580	58.6250	59.3925	0.0	59.4915	-0.7	60.9093	-2.6	-

† Rates for Jan 11. Bid/offer spreads in the Pound Spot table show only the last three decimal places. Sterling index calculated by the Bank of England. Base average 1990 = 100. Index rebased 1/2/95. * EMU member. The exchange rates printed in this table are also available on the internet at http://www.FT.com.

DOLLAR SPOT FORWARD AGAINST THE DOLLAR

Jan 12		Closing mid-point	Change on day	Bid/offer spread	Day's mid high	Day's mid low	One month Rate	One month %PA	Three months Rate	Three months %PA	One year Rate	One year %PA	J.P. Morgan Index
Europe													
Austria*	(Sch)	11.9214	-0.0088	188 - 240	12.0177	11.9116	11.902	2.0	11.8674	1.8	11.686	2.0	102.7
Belgium*	(BFr)	34.9490	-0.0258	414 - 566	35.2316	34.9208	34.8922	2.0	34.7908	1.8	34.2589	2.0	103.0
Denmark	(DKr)	6.4484	-0.0046	464 - 504	6.4981	6.4448	6.4415	1.3	6.4293	1.2	6.3604	1.4	105.4
Finland*	(FM)	5.1512	-0.0038	500 - 523	5.1928	5.1469	5.1428	2.0	5.1279	1.8	5.0495	2.0	81.1
France*	(FFr)	5.6839	-0.0042	817 - 842	5.7269	5.6783	5.6738	1.9	5.6573	1.8	5.5706	2.0	105.9
[illegible]													

† SDR rate per $ for Jan 11. ‡ Official rate set by Malaysian government. Bid/offer spreads in the Dollar Spot table show only the last three decimal places. [illegible] 1990=100. Bid, offer, mid spot rates and forward rates in both this and [illegible] values are rounded by the F.T. * EMU member. The exchange rates printed in this table are also available on the internet at [illegible]

Remaining rows as far as legible: South Korea (Won) 1173.50 +1.0000 200 - 500; Taiwan (T$) 32.1935 +0.0465 900 - 970; Thailand (Bt) 36.4250 +0.1800 000 - 500 [illegible]

WORLD INTEREST RATES

MONEY RATES

Jan 12	Over night	One month	Three mths	Six mths	One year	Lomb. inter.	Dis. rate	Repo rate
Euro-zone	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	3.00	3.00
Switzerland	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	1.00	-
US	[illegible]	[illegible]	[illegible]	5	[illegible]	-	4.50	-
Japan	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	0.50	-
$ LIBOR BBA London								
Interbank Fixing	-	5	[illegible]	[illegible]	[illegible]	-	-	-
US Dollar CDs	-	4.78	4.79	4.80	4.83	-	-	-
Euro Linked Ds	-	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-
SDR Linked Ds	-	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-
BBA Euro Libor	-	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-
Euro Euribor	-	3.213	3.190	3.153	3.122	-	-	-
EONIA	3.19	-	-	-	-	-	-	-
EURONIA	3.1819	-	-	-	-	-	-	-

London interbank fixing rate (LIBOR) is the BBA London rate, fixed at 11am. Mid rates are shown for the domestic Money Rates, US$ CDs, Euro & SDR Linked Deposits (Ds).

INTERNATIONAL CURRENCY RATES

Jan 12	Short term	7 days notice	One month	Three months	Six months	One year
Euro	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Danish Krone	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sterling	6 - 5¾	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Swiss Franc	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Canadian Dollar	[illegible]	[illegible]	5 - 4⅞	[illegible]	[illegible]	[illegible]
US Dollar	[illegible] - 5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Japanese Yen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Asian $Sing	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Short term rates are call for the US Dollar and Yen, others: two days' notice.

THREE MONTH EURIBOR FUTURES (MATIF) Paris Interbank offered rate

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Mar	96.91	96.91	+0.01	96.91	96.89	3,023	32,796
Jun	97.05	97.07	+0.01	97.07	97.05	9,714	14,147

THREE MONTH EUROMARK FUTURES (LIFFE)* DM1m points of 100% — [illegible]

ONE MONTH EUROMARK FUTURES (LIFFE) DM3m points of 100% — [illegible]

THREE MONTH EUROLIRA FUTURES (LIFFE) L1000m points of 100% — [illegible]

THREE MONTH EURO SWISS FRANC FUTURES (LIFFE) SFr1m points of 100% — [illegible]

THREE MONTH EUROYEN FUTURES (LIFFE) Y100m points of 100% — [illegible]

* LIFFE futures also traded on APT

THREE MONTH ECU FUTURES (LIFFE) Ecu1m points of 100% — [illegible]

Dec		96.800	+0.030			0	669

EUROLIRA OPTIONS (LIFFE) L1000m points of 100%

Strike Price	CALLS Mar	CALLS Jun	CALLS Sep	PUTS Mar	PUTS Jun	PUTS Sep
96875	0.080			0.045		
97000	0.040	0.160	0.235	0.130	0.095	0.125
97125	0.020			0.235		

Est. vol. total, Calls 0 Puts 0. Previous day's open int., Calls 2033 Puts 5478

CROSS RATES AND DERIVATIVES

EXCHANGE CROSS RATES

Jan 12		BFr	DKr	FFr	DM	I£	L	Fl	NKr	Es	Pta	SKr	SFr	£	C$	$	Y	€
Belgium*	(BFr)	100	18.45	16.26	4.848	1.952	4800	5.463	21.30	497.0	412.5	22.43	3.980	1.755	4.314	2.861	319.9	2.479
Denmark	(DKr)	54.20	10	8.813	2.628	1.058	2601	2.961	11.54	269.4	223.5	12.15	2.157	0.951	2.338	1.551	173.4	1.344
France*	(FFr)	61.50	11.35	10	2.982	1.201	2952	3.360	13.10	305.6	253.7	13.79	2.448	1.079	2.653	1.760	196.7	1.525
Germany*	(DM)	20.63	3.806	3.354	1	0.403	990.0	1.127	4.393	102.5	85.07	4.626	0.821	0.362	0.890	0.590	65.98	0.511
Ireland*	(I£)	51.22	9.451	8.329	2.483	1	2459	2.798	10.91	254.6	211.3	11.49	2.039	0.899	2.209	1.466	163.9	1.270
Italy*	(L)	2.083	0.384	0.339	0.101	0.041	100	0.114	0.444	10.35	8.593	0.467	0.083	0.037	0.090	0.060	6.665	0.052
Netherlands*	(Fl)	18.31	3.378	2.977	0.888	0.357	878.6	1	3.899	90.97	75.50	4.105	0.729	0.321	0.790	0.524	58.56	0.454
Norway	(NKr)	46.95	8.662	7.634	2.276	0.917	2253	2.565	10	233.3	193.6	10.53	1.868	0.824	2.025	1.343	150.2	1.164
Portugal*	(Es)	20.12	3.713	3.272	0.976	0.393	965.8	1.099	4.286	100	82.99	4.513	0.801	0.353	0.868	0.576	64.37	0.499
Spain*	(Pta)	24.24	4.473	3.942	1.175	0.473	1164	1.324	5.164	120.5	100	5.437	0.965	0.425	1.046	0.694	77.56	0.601
Sweden	(SKr)	44.59	8.227	7.251	2.162	0.871	2140	2.436	9.498	221.6	183.9	10	1.775	0.782	1.923	1.276	142.6	1.105
Switzerland	(SFr)	25.13	4.636	4.086	1.218	0.491	1206	1.373	5.352	124.9	103.6	5.635	1	0.441	1.084	0.719	80.38	0.623
UK	(£)	56.99	10.51	9.266	2.763	1.113	2735	3.113	12.14	283.2	235.0	12.78	2.268	1	2.458	1.631	182.3	1.413
Canada	(C$)	23.18	4.278	3.770	1.124	0.453	1113	1.266	4.938	115.2	95.62	5.199	0.923	0.407	1	0.663	74.16	0.575
USA	($)	34.95	6.448	5.683	1.694	0.682	1677	1.909	7.445	173.7	144.1	7.838	1.391	0.613	1.508	1	111.8	0.866
Japan	(Y)	31.26	5.768	5.083	1.516	0.610	1500	1.708	6.659	155.4	128.9	7.011	1.244	0.549	1.348	0.894	100	0.775
Euro	(€)	40.34	7.443	6.560	1.956	0.788	1936	2.204	8.593	200.5	166.4	9.047	1.606	0.708	1.740	1.154	129.0	1

Danish Kroner, French Franc, Norwegian Kroner, and Swedish Kronor per 10; Belgian Franc, Yen, Escudo, Lira and Peseta per 100. * EMU member.

D-MARK FUTURES (IMM) DM 125,000 per DM

	Open	Latest	Change	High	Low	Est. vol	Open int.
Mar	0.5935	0.5919	+0.0026	0.6347	0.5890	10,359	58,128
Jun	0.5940	0.5943	+0.0021	0.5940	0.5940	*57	1,386
Sep	0.5965	0.5965	-	0.5965	0.5965	2	139

JAPANESE YEN FUTURES (IMM) Yen 12.5m per Yen 100

	Open	Latest	Change	High	Low	Est. vol	Open int.
Mar	0.9144	0.9025	-0.0258	0.9285	0.8936	28,550	79,134
Jun	0.9231	0.9097	-0.0296	0.9115	0.9080	265	4,158
Sep	-	0.9450	-	0.9500	-	4	1,362

SWISS FRANC FUTURES (IMM) SFr 125,000 per SFr — [illegible]

STERLING FUTURES (IMM) £62,500 per £ — [illegible]

UK INTEREST RATES

LONDON MONEY RATES

Jan 12	Over-night	7 days notice	One month	Three months	Six months	One year
Interbank Sterling	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sterling CDs	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Treasury Bills	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Bank Bills	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Local authority deps.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Discount Market deps	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

UK clearing bank base lending rate 6 per cent from Jan 7, 1999 [illegible]

THREE MONTH STERLING FUTURES (LIFFE) £500,000 points of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
[illegible]							
[illegible]	95.090	95.080	+0.010	95.110	95.040	24027	177450
[illegible]	94.750	94.760	+0.010	94.770	94.720	5201	132880
[illegible]	95.090	95.080	-	95.100	95.040	9693	118855

Also traded on APT. All Open interest figs. are for previous day.

SHORT STERLING OPTIONS (LIFFE) £500,000 points of 100%

Strike Price	CALLS Mar	CALLS Jun	CALLS Sep	PUTS Mar	PUTS Jun	PUTS Sep
94500	0.095	0.495	0.690	0.095	0.085	0.110
94625	0.050			0.175		
94750	0.025	0.315	0.505	0.275	0.135	0.175
94875	0.010			0.385		
95000	0.005	0.175	0.350	0.505	0.245	0.270
95125	0			0.825		

Est. vol. total, Calls 16055 Puts 14803. Previous day's open int., Calls 443880 Puts 456566

EMS EUROPEAN CURRENCY UNIT RATES

[illegible]

PHILADELPHIA SE £/$ OPTIONS £31,250 (cents per pound) — [illegible]

PHILADELPHIA SE D-MARK/$ OPTIONS DM62,500 ($ per DM)

Strike Price	CALLS Jan	CALLS Feb	CALLS Mar	PUTS Jan	PUTS Feb	PUTS Mar
0.585	0.41	0.84	1.13	0.13	0.47	0.69
0.590	0.17	0.58	0.85	0.30	0.71	0.88
0.595	0.02	0.38	0.64	0.72	1.01	1.20

Previous day's vol., Calls n/a Puts n/a . Prev. day's open int., Calls n/a Puts n/a

THREE MONTH EURODOLLAR (IMM) $1m points of 100%

	Open	Latest	Change	High	Low	Est. vol	Open int.
Mar	94.25	95.00	+0.02	94.98	94.95	47,953	475,745
Jun	94.33	95.03	+0.04	95.02	94.97	89,099	429,402
Sep	95.02	-	-	95.01	94.94	108,757	395,599

US TREASURY BILL FUTURES (IMM) $1m per 100%

	Open	Latest	Change	High	Low	Est. vol	Open int.
Mar	95.74	95.74	-	95.77	95.71	26	2,054
Jun	95.78	-	-	95.79	95.78	9	91

All Open interest figs. are for previous day

EUROMARK OPTIONS (LIFFE) DM1m points of 100%

Strike Price	CALLS Jan	CALLS Feb	CALLS Mar	CALLS Jun	PUTS Jan	PUTS Feb	PUTS Mar	PUTS Jun
96875	0.045	0.060	0.060		0.010	0.025	0.045	
97000	0.010	0.025	0.040	0.160	0.100	0.115	0.130	0.095
97125	0.005	0.015	0.020		0.220	0.230	0.235	
97250	0	0.005	0.010	0.085	0.340	0.345	0.350	0.250

Est. vol. total, Calls 24584 Puts 400. Previous day's open int., Calls 720728 Puts 336780

EURO SWISS FRANC OPTIONS (LIFFE) SFr 1m points of 100%

Strike Price	CALLS Mar	CALLS Jun	CALLS Sep	PUTS Mar	PUTS Jun	PUTS Sep
98750	0.090	0.115	0.150	0.270	0.405	0.540
98875	0.040			0.365		

Est. vol. total, Calls 0 Puts 0. Previous day's open int., Calls 3360 Puts 2062

BASE LENDING RATES

	%		%		%
Adam & Company	6.00	Exeter Trust Limited	7.00	●Singer & Friedlander	6.00
Allied Irish Bank (GB)	6.00	Financial & Gen Bank	6.00	Smith & Williamson	6.00
●Henry Ansbacher	6.00	●Robert Fleming & Co	6.00	Sun Bank	6.00
Banco Bilbao Vizcaya	6.00	Habib Bank AG Zurich	6.00	TSB	6.00
Bank of Cyprus	6.00	Heritable & Gen Inv Bk	6.00	United Bank of Kuwait	6.00
Bank of Ireland	6.00	C. Hoare & Co	6.00	Unity Trust Bank Plc	6.00
Bank of India	6.00	●SG Hambros Bank & Trust	6.00	Whiteaway Laidlaw	6.00
Bank of Scotland	6.00	Hongkong & Shanghai	6.00	Yorkshire Bank	6.00
Barclays Bank	6.00	Investec Bank (UK) Ltd	6.00		
Brit Bk of Mid East	6.00	Julian Hodge Bank	6.00		
●Brown Shipley & Co Ltd	6.00	●Leopold Joseph & Sons	6.00		
Citibank NA	6.00	Lloyds Bank	6.00		
Clydesdale Bank	6.00	Midland Bank	6.25		
The Co-operative Bank	6.00	NatWestminster	6.00		
Coutts & Co	6.00	●Rea Brothers	6.00		
Cyprus Popular Bank	6.25	Royal Bk of Scotland	6.25		
Duncan Lawrie	6.00	Scottish Widows Bank	6.75		

● Members of London Investment Banking Association

China to spend $2bn on grain storage

By James Harding in Shanghai

China plans to spend more than $2bn upgrading its grain silos and building new granaries after nearly 15 per cent of last year's 490m tonne grain crop had to be kept outside because of inadequate storage facilities.

After four years of bumper harvests, the dearth of silos left much grain exposed to rats, fires and rain, according to a report yesterday from China's official Xinhua news agency.

Open-air storage of some 73.5m tonnes of grain is the latest example of problems in the state management of China's farm produce.

Last year, Chinese auditors discovered that more than $25bn had gone missing from state grain purchasing funds since 1992. The managers of the government's grain agencies had sold produce below cost and diverted money into real estate projects, stock market investment and personal luxuries.

Zhu Rongji, the Chinese prime minister who has made the reform of grain management a priority, toured a provincial silo last year and found, to his misplaced satisfaction, that the store was full. It later emerged that the local granary had hired the 1,000 tonnes of rice to impress the prime minister and then returned it after Mr Zhu went back to Beijing.

The problems within the government grain purchasing and storage systems are likely to raise concerns about the reliability of official assertions of plentiful supplies in state silos.

Central government plans to invest RMB18bn ($2.17bn) in upgrading old silos and building granaries, boosting storage capacity by 27.5m tonnes by this summer, the state news agency said. Beijing will build 16 granaries in Inner Mongolia.

La Niña upsets Indonesian cocoa and coffee

By Sander Thoenes in Jakarta

Indonesian producers of cocoa and coffee, still reeling from the after-effects of El Niño, the freak weather phenomenon, have said the heavy rains caused by La Niña, its successor, are taking their toll as well.

Floods have blocked roads and left more than 2,000 tonnes of cocoa beans stranded on the island of Sulawesi, the largest production area.

Traders and producers said that was a relatively minor problem compared with the damage rain could do to production, just as one of the main harvests is trickling in.

"We are afraid of the effects of more rain on the flowering of the trees and the drying of the beans," said Peter Siswoputranto, executive director of the Indonesian Cocoa Association.

Coffee traders said the same held true for coffee. The next harvest is expected only in March, but that is still within the usual rainy season.

Palm oil traders said they had noted some deterioration in the quality of palm oil, an increasingly popular commodity for Indonesian plantations. The deterioration indicated that fruit bunches had not been processed fast enough because of delays in harvesting and transport caused by the rains.

Indonesian meteorologists have warned that La Niña, which followed El Niño, may cause heavier rains than usual in the coming months. Small farmers in Sulawesi, who farm 200,000 of the 468,000 hectares set aside for cocoa, have just started drying the beans but most lack facilities to protect their harvest from the rain.

Indonesia produced some 310,000 tonnes of cocoa in 1998, 10 per cent below expectations because of a severe drought, and is lagging behind targets to overtake Ghana as the world's second largest producer, after Ivory Coast.

Mr Siswoputranto said Indonesia was lagging even further behind in terms of bean quality, because last year's drought had caused trees to yield smaller beans.

Indonesia produced 330,000 tonnes of coffee, mostly robusta, in 1998. Drought had depressed the coffee yield as well but less severely.

Mr Siswoputranto said heavy rains assisted the recovery of cocoa trees that were affected by the drought. However, they also boosted the spread of cocoa pod borers, insects that were introduced in Malaysian cocoa seeds in 1993 and which have halved the yields in affected areas.

Indonesia would have lagged even further behind targets, however, but for a positive side-effect of the country's economic crisis: the collapse of the rupiah has boosted the local price of cocoa, coffee and other dollar-denominated commodities, encouraging many farmers to switch crops.

Mr Siswoputranto said his association had encouraged farmers to use last year's windfall profits to replace trees irreparably damaged by the drought.

Cocoa prices have been weak. According to Mr Siswoputranto, demand has weakened because western clients have been opting for substitutes to cocoa butter.

Inside Indonesia, the recent rebound of the rupiah has meant lower profits for the farmers, just as the largest harvest comes in.

Cocoa trees flower all year round, but producers said the combination of El Niño and La Niña had upset the usual cycles.

Green shoots of recovery

Scientists in Nigeria have developed a tree which could restore the country as a leading cocoa producer. **William Wallis** reports

The Cocoa Research Institute of Nigeria is an unlikely setting for a scientific breakthrough. The institute has only one working telephone – the director's mobile. Documents are typed and stored in piles of old brown envelopes. Greenhouses have barely a pane of glass.

But scientists working at the institute in south western Nigeria, say they have developed a hybrid tree that could reverse the long-term decline of the country's cocoa production, once more than 300,000 tonnes annually but now averaging less than half that figure.

Their work will also contribute to the international search for a tree resistant to the ravages of black pod disease which destroys as much as 30 per cent of cocoa crops globally each year.

The hybrid was developed from 59 varieties over a period of 15 years, according to Dr Tunde Esan, a Nigerian tree crop specialist. It combines longevity, low maintenance and disease resistance in established local trees with more frequent and fatter yields from imported West Indian and Brazilian ones.

Dr Esan says it can produce more than two metric tonnes of cocoa per hectare, about four times the average in Nigeria, and could remain productive for 50 years.

Moreover, it reaches harvest maturity in only 30 months, halving the painful period of stock rejuvenation during which farmers feel the pinch.

This could be a key element in Nigeria's plans to re-emerge as a top cocoa producer. Its plantations and farms are in desperate need of replanting following years of neglect exacerbated by inconsistency in agricultural policy by the country's military rulers.

The collapse in world oil prices has underlined the urgent need for Africa's most populous nation to diversify its source of foreign exchange earnings, more than 90 per cent of which derive from oil. Cocoa comes in a distant second and production has long been outstripped by other West African producers, such as Ivory Coast and Ghana.

"The problem has been that most Nigerians are only interested in quick turnaround investments," says Dr Ayoola Fatima, director of Crin.

Traders say perfect climatic conditions mean this year's cocoa harvest will reach an estimated 160,000 tonnes, 30,000 tonnes more than last year.

However, if the new hybrid tree is to fulfil its promise and reverse overall negative trends, it will require significant government backing and a revolution in marketing strategy to overcome the dogged conservativeness of Nigeria's farmers who are clinging to decaying stock.

Most of Nigeria's cocoa is produced in tiny quantities by an estimated 400,000 smallholder farmers, complicating the task of replanting on a large scale.

"At the moment there is considerable resistance among the farmers," says Samuel Oladoyibo, who liaises with smallholders for Crin. "They want to see physical evidence their neighbour is doing better with a different tree."

Bitter harvest: neglect has seen output fall to less than half the 300,000 tonnes once produced

Government-subsidised seedlings are distributed at a fraction of the cost of their production. But this year there were only 60,000 of the new hybrid on sale.

New management at the research institute aims to change that, allocating a higher proportion of spending on marketing. Dr Fatima says he has found a sponsor to help put 3m seedlings on the market in 1999. He also plans to rejuvenate the institute's own plantations – among the largest in the country – to achieve self-sufficiency and safeguard the institute against the vagaries of government policy.

"I've always seen the need to be self-sustaining. Since the age of 18 I didn't want to be seen to ask for anything," he says. "In the past the institute has tended to just carry out research and leave it there. We want to change that."

In spite of its disrepair, Crin is an important partner in a nine-country search, sponsored by the Common Fund for Commodities and co-ordinated by the International Plant Genetics Resources Institute, for a tree resistant to black pod disease.

Using the latest "leaf dish" tests developed by a Cameroonian PhD student who worked at Crin, scientists are able to test disease tolerance in fresh progenies after three weeks, cutting time spent on development by years. With as diverse a range of cocoa varieties as any other producer and a model hybrid that has already shown impressive levels of resistance to pod rot, Nigeria is well placed to contribute.

The danger, says Dr Esan, is that if they cannot succeed beyond research level their findings will fuel the success of competitors rather than of Nigeria.

The example of palm oil is illustrative. Nigeria was once the world's largest exporter but in a period of 20 years has become the largest importer. Meanwhile, Malaysia, which imported palms from Nigeria, has become one of the world's top producers.

Opec cool to Kuwait call for meeting

MARKETS REPORT

By Robert Corzine, Gillian O'Connor and Caroline Fossey

Crude oil prices fell yesterday on profit-taking and a poor reaction by members of the Organisation of Petroleum Exporting Countries to a Kuwaiti call for an emergency Opec meeting.

Brent Blend for February delivery was quoted at $11.73 in late trading on London's International Petroleum Exchange, 31 cents down on Monday's close.

The extent of the recent price weakness was reflected in figures from the Royal Bank of Scotland Oil index, showing UK North Sea revenues at their lowest level since the index was launched in 1983.

Gold Fields Mineral Services predicted that the gold price would stay in a range of $270-$310 an ounce in the first half of this year. Yesterday's price on the London bullion market was in the middle, and the report provided little fodder for bulls.

Consultants expect central bank sales and loans to continue putting a ceiling on the price. They also say that, "unless there is an important shift in producer attitudes to price, hedging will act to constrain any sustained break-out above $310 an ounce". They suggest that, because of falling costs, companies have no incentive to cut production, and that hedging can be profitable at $287 an ounce.

Some volatility on the London Metal Exchange was attributed to currency movements: on nickel, for instance, the price range was more than $100 a tonne.

The benchmark March coffee contract closed $5 down at $1,763 a tonne on Liffe after New York discounted news of a frost in Mexico's coffee-producing areas.

COMMODITIES PRICES

BASE METALS

LONDON METAL EXCHANGE

(Prices from Amalgamated Metal Trading)

■ ALUMINIUM, 99.7 PURITY ($ per tonne)

	Cash	3 mths
Close	1253-4	1258-9
Previous	1250-1	1255-6
High/low		1263/1249
AM Official	1254-5	1260.5-1.0
Kerb close		1252-53
Open int.	296,770	
Total daily turnover	104,432	

■ ALUMINIUM ALLOY ($ per tonne)

	Cash	3 mths
Close	1035-40	1065-68
Previous	1035-40	1065-70
High/low		1071/1065
AM Official	1041-2	1068-71
Kerb close		1066-7
Open int.	7,084	
Total daily turnover	1,319	

■ LEAD ($ per tonne)

	Cash	3 mths
Close	495-6	496-7
Previous	511-2	504-5
High/low		499/493
AM Official	502-4	498.5-9.5
Kerb close		494-5
Open int.	39,409	
Total daily turnover	12,125	

■ NICKEL ($ per tonne)

	Cash	3 mths
Close	4510-20	4575-85
Previous	4560-70	4630-35
High/low		4700/4550
AM Official	4610-15	4670-75
Kerb close		4555-60
Open int.	68,934	
Total daily turnover	24,762	

■ TIN ($ per tonne)

	Cash	3 mths
Close	5135-45	5120-30
Previous	5100-05	5080-95
High/low		5140/5070
AM Official	5085-90	5075-80
Kerb close		5115-20
Open int.	20,468	
Total daily turnover	7,666	

■ ZINC, special high grade ($ per tonne)

	Cash	3 mths
Close	937-38	956-7
Previous	942.5-1.5	961-2
High/low		967/952
AM Official	945-6	965-5.5
Kerb close		948-9
Open int.	94,540	
Total daily turnover	[illegible]	

■ COPPER, grade A ($ per tonne)

	Cash	3 mths
Close	[illegible]	[illegible]
Previous	[illegible]	[illegible]
High/low		[illegible]
AM Official	[illegible]	[illegible]
Kerb close		[illegible]
Open int.	[illegible]	
Total daily turnover	[illegible]	

■ LME AM Official £/$ rate: [illegible]

LME Closing £/$ rate: [illegible]

■ HIGH GRADE COPPER (COMEX)

	Sett price	Day's change	High	Low	Vol	Open int
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

PRECIOUS METALS

■ LONDON BULLION MARKET

(Prices supplied by N M Rothschild)

[illegible]	[illegible]	[illegible]	[illegible]

Precious Metals continued

■ GOLD COMEX (100 Troy oz.; $/troy oz.)

	Sett price	Day's change	High	Low	Vol	Open int
Feb	289.3	-4.3	293.9	288.0	33,158	72,618
Apr	291.4	-4.3	296.2	290.0	1,106	24,726
Jun	293.3	-4.4	296.8	292.2	813	17,061
Aug	295.2	-4.4	298.3	294.8	52	6,762
Oct	297.0	-4.4	-	-	21	2,571
Dec	298.7	-4.4	302.1	298.7	853	12,307
Total					36,375	169,856

■ PLATINUM NYMEX (50 Troy oz.; $/troy oz.)

	Sett price	Day's change	High	Low	Vol	Open int
Jan	355.5	-8.6	359.0	354.5	11	36
Apr	357.0	-8.8	367.5	355.2	1,106	10,761
Jul	358.5	-8.8	359.5	359.0	2	573
Oct	359.8	-8.8	-	-	-	1,094
Total					1,115	12,467

■ PALLADIUM NYMEX (100 Troy oz.; $/troy oz.)

	Sett price	Day's change	High	Low	Vol	Open int
Mar	314.50	-2.25	319.80	311.20	109	2,571
Jun	308.50	-2.25	-	305.50	1	60
Sep	302.50	-2.25	-	-	1	127
Total					119	2,789

■ SILVER COMEX (5,000 Troy oz.; Cents/troy oz.)

	Sett price	Day's change	High	Low	Vol	Open int
Jan	521.3	-10.8	530.0	530.0	32	51
Mar	524.5	-11.0	541.0	522.5	12,757	54,129
May	527.7	-10.9	539.0	526.0	239	7,896
Jul	530.0	-10.8	539.5	528.5	97	6,674
Sep	532.2	-10.8	540.0	531.5	35	1,770
Dec	534.1	-10.8	543.5	533.0	61	6,043
Total					13,426	80,780

ENERGY

■ CRUDE OIL NYMEX (1,000 barrels, $/barrel)

	Latest price	Day's change	High	Low	Vol	Open int
Feb	13.17	-0.27	13.50	13.02	72,751	85,384
Mar	13.19	-0.28	13.51	13.05	56,237	85,639
Apr	13.20	-0.28	13.44	13.14	14,346	40,783
May	13.32	-0.24	13.47	13.21	7,550	32,042
Jun	13.42	-0.24	13.47	13.35	9,245	27,690
Jul	13.52	-0.25	13.60	13.48	4,012	21,790
Total					178,379	511,601

■ CRUDE OIL IPE ($/barrel)

	Open price	Day's change	High	Low	Vol	Open int
Feb	11.73	-0.31	12.02	11.67	12,689	41,327
Mar	11.57	-0.33	11.87	11.52	21,356	71,931
Apr	11.65	-0.34	11.95	11.61	3,504	38,057
May	11.77	-0.32	12.10	11.73	1,595	18,249
Jun	11.95	-0.26	12.14	11.92	407	27,783
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

■ HEATING OIL NYMEX (42,000 US galls, c/US galls)

	Latest price	Day's change	High	Low	Vol	Open int
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

■ GAS OIL IPE ($/tonne)

	Sett price	Day's change	High	Low	Vol	Open int
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

■ NATURAL GAS IPE (1,000 therms; pence per therm)

	Sett price	Day's change	High	Low	Vol	Open int
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

■ NATURAL GAS NYMEX (10,000 mmBtu; $/mmBtu)

	Latest price	Day's change	High	Low	Vol	Open int
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

■ UNLEADED GASOLINE NYMEX (42,000 US galls; c/US galls)

	Latest price	Day's change	High	Low	Vol	Open int
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

GRAINS AND OIL SEEDS

■ WHEAT LIFFE (100 tonnes; £ per tonne)

	Sett price	Day's change	High	Low	Vol	Open int
Jan	76.00	+0.20	76.50	76.00	15	302
Mar	76.25	+0.25	76.75	76.25	100	2,907
May	78.10	+0.10	78.40	78.10	66	3,820
Jul	80.05	+0.05	80.25	80.05	72	486
Sep	79.25	-	-	-	-	144
Nov	81.00	-	81.25	81.00	56	1,522
Total					329	9,307

■ WHEAT CBT (5,000bu min; cents/60lb bushel)

	Sett price	Day's change	High	Low	Vol	Open int
Mar	281.50	-4.25	286.00	280.00	13,710	65,623
May	291.50	-4.75	296.00	290.50	1,362	12,830
Jul	302.00	-4.25	307.75	300.50	3,394	31,273
Sep	311.75	-4.50	315.00	311.00	66	1,868
Dec	325.00	-3.75	328.50	324.00	115	2,278
Total					18,647	113,872

■ MAIZE CBT (5,000 bu min; cents/56lb bushel)

	Sett price	Day's change	High	Low	Vol	Open int
Mar	217.25	-2.50	220.00	216.25	23,108	175,252
May	223.25	-3.00	227.00	222.25	4,251	59,907
Jul	229.00	-3.50	232.75	228.25	4,575	64,139
Sep	235.50	-3.25	237.50	234.00	648	14,918
Dec	241.25	-4.00	245.50	239.25	2,107	30,793
Mar	248.50	-3.25	249.75	245.75	26	2,399
Total					38,751	349,552

■ BARLEY LIFFE (100 tonnes; £ per tonne)

	Sett price	Day's change	High	Low	Vol	Open int
Jan	78.50	+0.25	-	-	-	67
Mar	79.75	+0.25	79.75	79.75	82	428
May	80.75	+0.25	-	-	-	42
Sep	79.00	+0.50	79.00	79.00	-	25
Nov	81.00	+0.50	81.00	81.00	30	45
Total					37	627

■ SOYABEANS CBT (5,000bu min; cents/60lb bushel)

	Sett price	Day's change	High	Low	Vol	Open int
Jan	535.00	-7.25	542.00	534.00	2,706	5,550
Mar	538.50	-8.25	547.50	536.25	28,303	64,018
May	544.00	-9.25	553.50	542.00	5,882	24,105
Jul	549.00	-9.75	560.00	547.00	3,053	28,114
Aug	550.00	-10.25	554.50	549.00	272	6,171
Sep	549.00	-10.75	553.50	549.00	349	1,868
Total					41,678	143,437

■ SOYABEAN OIL CBT (60,000lbs; cents/lb)

	Sett price	Day's change	High	Low	Vol	Open int
Jan	23.03	-0.24	23.33	22.88	1,515	1,324
Mar	23.25	-0.24	23.53	23.07	7,964	56,438
May	23.47	-0.22	23.72	23.29	1,354	20,939
Jul	23.59	-0.29	23.87	23.45	1,562	17,728
Aug	23.68	-0.24	23.98	23.50	129	5,272
Sep	23.73	-0.27	23.90	23.53	372	3,390
Total					16,708	112,368

■ SOYABEAN MEAL CBT (100 tons, $/ton)

	Sett price	Day's change	High	Low	Vol	Open int
Jan	138.7	-2.3	140.9	138.3	3,336	7,983
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

■ POTATOES LIFFE (20 tonnes; £ per tonne)

	Sett price	Day's change	High	Low	Vol	Open int
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

■ FREIGHT (BIFFEX) LIFFE ($10/index point)

	Sett price	Day's change	High	Low	Vol	Open int
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

PULP AND PAPER

■ PULPEX (NBSK), ($, 24 air dry tons)

	Sett price	Day's change	High	Low	Vol	Open int
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

FUTURES DATA

All futures data supplied by CMS.

SOFTS

■ COCOA LIFFE (10 tonnes; £/tonne)

	Sett price	Day's change	High	Low	Vol	Open int
Mar	932	-6	937	926	3,421	55,279
May	952	-6	956	947	985	29,242
Jul	972	-6	976	967	376	12,895
Sep	991	-5	994	987	526	29,629
Dec	1013	-6	1016	1010	133	16,902
Mar	1035	-6	1036	1036	10	13,178
Total					5,471	168,886

■ COCOA CSCE (10 tonnes; $/tonnes)

	Sett price	Day's change	High	Low	Vol	Open int
Mar	1392	+3	1402	1377	8,880	34,619
May	1420	+2	1430	1405	2,948	19,625
Jul	1446	+4	1455	1434	733	5,795
Sep	1469	+4	1486	1460	36	4,491
Dec	1502	+4	1500	1496	13	5,848
Mar	1534	+4	1533	1533	104	6,263
Total					12,619	76,654

■ COCOA (ICCO) (SDR's/tonne)

Jan 11	Price	Prev. day
Daily	1063.14	1042.62

■ COFFEE LIFFE (5 tonnes; $/tonne)

	Sett price	Day's change	High	Low	Vol	Open int
Jan	1791	-12	1809	1790	414	6,074
Mar	1763	-5	1780	1763	2,174	25,894
May	1703	-10	1722	1703	418	7,857
Jul	1683	-10	1697	1697	8	1,651
Sep	1663	-10	1685	1670	63	764
Nov	1648	-13	1655	1655	17	238
Total					3,395	42,487

■ COFFEE 'C' CSCE (37,500lbs; cents/lbs)

	Sett price	Day's change	High	Low	Vol	Open int
Mar	117.15	-2.80	122.50	117.00	5,528	25,614
May	118.15	-2.75	122.75	118.00	1,477	6,276
Jul	118.90	-2.35	122.50	119.00	428	2,487
Sep	119.65	-2.20	122.50	121.50	142	1,952
Dec	120.40	-2.05	123.00	122.40	28	911
Mar	121.15	-2.00	123.50	123.25	28	78
Total					7,631	37,322

■ COFFEE (ICO) (US cents/pound)

Jan 11	Price	Prev. day
Comp. daily	101.56	101.81
15 day average	102.30	102.28

■ WHITE SUGAR LIFFE (50 tonnes; $/tonne)

	Sett price	Day's change	High	Low	Vol	Open int
Mar	251.2	-1.3	253.0	250.5	1,106	16,620
May	250.6	-1.4	252.9	250.2	491	10,827
Aug	248.1	-1.1	248.5	248.5	415	5,584
Oct	241.1	-1.6	241.5	241.5	350	4,729
Dec	241.8	-2.8	-	-	-	584
Mar	241.9	-4.8	-	-	-	654
Total					1,530	38,890

■ SUGAR '11' CSCE (112,000lbs; cents/lbs)

	Sett price	Day's change	High	Low	Vol	Open int
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

■ COTTON NYCE (50,000lbs; cents/lbs)

	Sett price	Day's change	High	Low	Vol	Open int
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

■ ORANGE JUICE NYCE (15,000lbs; cents/lbs)

	Sett price	Day's change	High	Low	Vol	Open int
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

VOLUME DATA

[illegible]

INDICES

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

MEAT AND LIVESTOCK

■ LIVE CATTLE CME (40,000lbs; cents/lbs)

	Sett Price	Day's change	High	Low	Vol	Open int
Feb	62.325	-	62.875	62.100	8,082	40,881
Apr	65.375	-0.125	65.700	65.125	5,671	35,633
Jun	64.450	-0.225	64.825	64.400	2,592	19,555
Aug	64.300	-0.275	64.575	64.250	494	10,906
Oct	66.150	-0.250	66.250	66.000	489	5,846
Dec	67.100	-0.125	67.200	66.950	78	2,187
Total					17,386	114,844

■ LEAN HOGS CME (40,000lbs; cents/lbs)

	Sett Price	Day's change	High	Low	Vol	Open int
Feb	41.200	+2.000	41.200	39.450	6,050	16,480
Apr	43.850	+0.780	45.000	42.550	4,482	11,769
Jun	54.150	+0.975	55.175	53.050	1,585	7,046
Jul	55.300	+0.925	56.375	54.000	381	3,832
Aug	56.575	+0.775	56.950	55.700	214	3,260
Oct	53.975	+0.625	58.300	55.050	172	3,067
Total					12,953	46,699

■ PORK BELLIES CME (40,000lbs; cents/lbs)

	Sett Price	Day's change	High	Low	Vol	Open int
Feb	55.225	+3.000	55.225	52.225	1,931	4,193
Mar	55.425	+3.000	55.425	52.400	343	1,174
May	56.625	+3.000	56.625	54.000	78	855
Jul	57.200	+2.950	57.250	53.800	25	731
Total					2,387	7,234

LONDON TRADED OPTIONS

Strike price $ tonne	Calls		Puts	
■ ALUMINIUM (99.7%) LME	Feb	May	Feb	May
1250	15	49	25	40
1300	3	28	63	69
1350	-	14	110	105
■ COPPER (Grade A) LME	Feb	May	Feb	May
1450	39	89	21	47
1500	17	63	49	70
1550	6	43	87	100
■ COFFEE LIFFE	Mar	May	Mar	May
1700	92	90	29	87
1750	63	69	50	116
1800	40	54	77	151
■ COCOA LIFFE	Mar	May	Mar	May
925	33	59	26	32
950	22	46	40	44
975	14	36	57	59
■ BRENT CRUDE IPE	Feb	Mar	Feb	Mar
1150	70	-	47	-
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

LONDON SPOT MARKETS

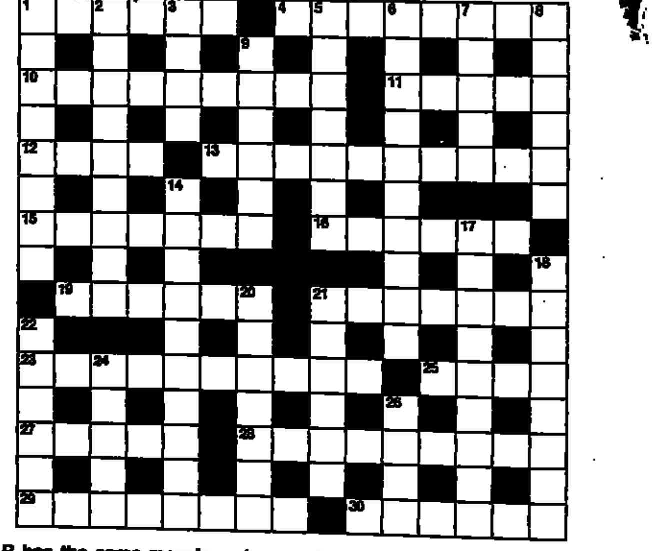
		+or-
[illegible]	[illegible]	[illegible]

JOTTER PAD

For solutions to today's crossword call 0891 430060. Calls cost 50p a minute.

CROSSWORD

No.9,886 Set by CINEPHILE



R has the same meaning wherever it occurs in the clues

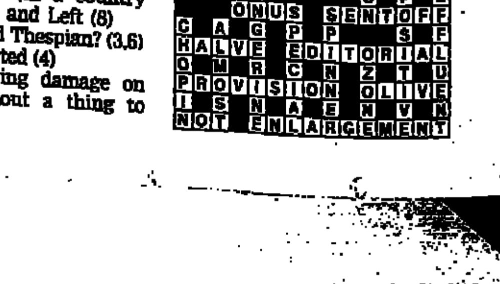
ACROSS

1 Black stuff a man needs to relieve (6)
4 Quick way to a minimalist hairstyle? (5,3)
10 Don't use enough lingerie? (9)
11 R's clicked (5)
12 Rs get light from the right (4)
13 Converse with BA about keeping of regulations (10)
15 Incite to throw dice, perhaps – a snack (3,4)
16 City of steel was first to break as well (6)
19 The crow, deprived of love, became a miserable creature (6)
21 Encouragement about publicity for swagger (7)
23 Religious anarchist displaying animation at pole (10)
25 R for love? (4)
27 Container's attempt at game (5)
28 Routine tasks leave little time to study political economist (9)
29 Attempt to include a ruse, possibly under Brown? (8)
30 R to spoil the joke (6)

DOWN

1 R for Right (in a country gentleman) and Left (8)
2 Experienced Thespian? (3,6)
3 R often started (4)
5, 11 R causing damage on river, without a thing to wear (7,5)
6 Rapid eye movement on elliptical front for house clearance (7,3)
7 Cause agitation in milk container (5)
8 Invite eternal wobble (6)
9 R sees Free French put up with Gaullist leader (6)
14 Opposing in and out involvement with America non-stop (10)
17 Without much light outside, almost get rid of devilry (9)
18 A hundred and more permitted to make a quilt (8)
20 R from the River Thames (7)
21 R with a beard (6)
22 R, except for raised part (6)
24 Present, perhaps – it isn't easy (5)
26 Old literature partly added up (4)

Solution 9,885



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FT MANAGED FUNDS SERVICE

● FT Cityline Unit Trust Prices are available over the telephone. Call the FT Cityline Help Desk on (+44 171) 873 4378 for more details.

OFFSHORE AND OVERSEAS

BERMUDA (FSA RECOGNISED)

Fidelity Currency Funds Ltd

BERMUDA (REGULATED)(**)

CAYMAN ISLANDS (REGULATED)(**)

GUERNSEY (REGULATED)(**)

GUERNSEY (FSA RECOGNISED)

Barings Intl Fd Mngrs (Ireland) Ltd

Herald Investment Fund Plc

Investec Guinness Flight FM (Ireland) Ltd

Christows Investments Plc

Lazard Investment Funds Ltd

IRELAND (REGULATED)(**)

IRELAND (FSA RECOGNISED)

ISLE OF MAN (FSA RECOGNISED)

ISLE OF MAN (REGULATED)(**)

JERSEY (FSA RECOGNISED)

FT MANAGED FUNDS SERVICE

● FT Cityline Unit Trust Prices are available over the telephone. Call the FT Cityline Help Desk on (+44 171) 873 4378 for more details.

Murray Johnstone (Jersey) Limited

Lloyds Bank Luxembourg

Schroder International Selection Fd - Contd.

LUXEMBOURG (FSA RECOGNISED)

ABN AMRO Funds (z)

JERSEY (REGULATED)(**)

LUXEMBOURG (REGULATED)(**)

Sigma Fund SICAV

OFFSHORE INSURANCES

Aberdeen International Ltd

هكذا من الأصل

FT MANAGED FUNDS SERVICE

Offshore Insurances and Other Funds

● FT Cityline Unit Trust Prices are available over the telephone. Call the FT Cityline Help Desk on (+44 171) 873 4378 for more details.

OTHER OFFSHORE FUNDS

LONDON SHARE SERVICE

ALCOHOLIC BEVERAGES

[illegible]

BANKS, RETAIL

[illegible]

BREWERIES, PUBS & REST

[illegible]

BUILDING MATS. & MERCHANTS

[illegible]

CHEMICALS

[illegible]

CONSTRUCTION

[illegible]

CONSTRUCTION - Continued

[illegible]

DISTRIBUTORS

[illegible]

DIVERSIFIED INDUSTRIALS

[illegible]

ELECTRICITY

[illegible]

ELECTRONIC & ELECTRICAL EQPT

[illegible]

ENGINEERING

[illegible]

ENGINEERING - Continued

[illegible]

ENGINEERING - Continued

[illegible]

ENGINEERING, VEHICLES

[illegible]

EXTRACTIVE INDUSTRIES

[illegible]

FOOD PRODUCERS

[illegible]

FOOD PRODUCERS - Continued

[illegible]

GAS DISTRIBUTION

[illegible]

HEALTH CARE

[illegible]

HEALTH CARE - Continued

[illegible]

HOUSEHOLD GOODS & TEXT

[illegible]

INSURANCE

[illegible]

INSURANCE - Continued

[illegible]

INVESTMENT TRUSTS

[illegible]

INVESTMENT TRUSTS - Continued

[illegible]

INV TRUSTS SPLIT CAPITAL

[illegible]

هكذا من الاصل

LONDON SHARE SERVICE

OTHER INVESTMENT TRUSTS

The following investment trusts are not eligible for inclusion in the FTSE Actuaries Share Indices

	Notes	Price	+ or -	52 week high	52 week low	Yld Gr's	NAV	Dis or Pm(-)
Approved by the Inland Revenue								
Aberdeen Emg Asia	♣	25½	-¼	*30½	13½	-	30.5	16.4
Warrants		9⅝	-	11¼	0½	-	-	-
Atlantis Japan Gwth Fd.		231½	+7¼	282	158	-	316.2	26.8
Warrants		6¼	-	41	1½	-	-	-
Baring Emrg Euro	♣	92	-1	118	55	-	118.4	22.3
Warrants		47	+¼	67½	29¼	-	-	-
Brazilian IT		36¼	+¼	61½	19¼	3.1	-	-
Warrants		9	+¼	33½	7	-	-	-
Central Euro Gwth	♣	43½	+¼	68½	26¼	-	58.6	25.8
Warrants		0½	-	11¼	0½	-	-	-
East German		11¼	-	13	5½	-	21.7	48.2
Egypt Trust $		628¾	+7½	675	567½	1.4	-	-
F&C Latin American $	♣	66½	-2¼	128½	48	-	90.8	26.4
Warrants		32	-1	78	18½	-	-	-
1st Russian Frontiers $	♣	180	+5	1102½	180	-	417.7	56.9
Warrants		40	-	588	35	-	-	-
Warrants II		22½	-	525	20	-	-	-
Five Arrows Chile		103	-1½	111½	97½	-	133.2	22.6
Warrants		1	-	18¼	0½	-	-	-
Govett Asian Smlr	♣	72	-1	103	31	0.9	103.5	30.4
Baring Sth Asia Co.	♣	30½ xd	-	38½	15½	0.6	40.4	24.5
Warrants		4½	-	7½	1½	-	-	-
Indonesia Fund		130¼	+¼	199¼	130	-	-	-
Warrants		8	-	*23	3¼	-	-	-
Israel Fund $		49¼	-	63¾	39¼	-	58.5	17.7
Korea-Europe $	♣	219	-3½	222½	88	0.6	270.8	19.1
Korea Liberal $		125¾	-5¼	131	60¼	-	192.9	34.8
Warrants		15¼	-	15¼	5	-	-	-
Lazard Birla India	♣	32½	-¼	38¼	22½	-	-	-
Warrants		6¼	+¼	8	2½	-	-	-
Schroder Korea Fd $	♣	375¼	+2	375¼	141¾	-	-	-

MEDIA - Continued

OIL EXPLORATION & PRODUCTION

OIL, INTEGRATED

OTHER FINANCIAL

INVESTMENT COMPANIES

LEISURE & HOTELS

LIFE ASSURANCE

MEDIA

PAPER, PACKAGING & PRINTING

PHARMACEUTICALS

PROPERTY

PROPERTY - Continued

RETAILERS, FOOD

RETAILERS, GENERAL

RETAILERS, GENERAL - Continued

SUPPORT SERVICES

SUPPORT SERVICES - Continued

TELECOMMUNICATIONS

TOBACCO

TRANSPORT

TRANSPORT - Continued

WATER

AMERICANS

CANADIANS

SOUTH AFRICANS

	Notes	Price	+ or -	52 week high	52 week low	Volume '000s	Yld Gr's	P/E
Anglo Am Ind R		£31¼	-⅛	*£18⅜	£6¼	-	6.3	5.8
Barlow R	♣	£2¼	+¼	£5¼	£1⅜	-	4.8	♦
Investec Group		£21⅝	-⅜	£26⅛	£12⅞	-	-	-
Investec Hldgs		£28⅝	-⅜	£28⅝	£12⅞	-	-	-
SA Breweries R	♣	£16⅜	-⅛	£20½	£7¼	-	3.6	15.4
Standard Bank R		£1⅞	-	£3⅛	£1⅛	-	2.8	-
Tiger Oats		625	-	986	375	-	2.9	♦
Tongaat-Hulett R		374½	-8¼	736	287¼	-	5.6	6.7

TRADED INDEX SECURITIES

	Notes	Price	+ or -	52 week high	52 week low	Volume '000s	Yld Gr's	P/E
FTSE 100 TRACKS		£5780xd	-	£61280	£47700	-	-	-

AIM

Alternative Investment Market

The Alternative Investment Market, designed primarily for small companies, is regulated by the London Stock Exchange but has less demanding rules than the SE Official List

AIM - Continued

GUIDE TO LONDON SHARE SERVICE

Prices and trading volumes for the London Share Service are delivered by Extel, part of Financial Times Information.

Company classifications are based on those used for the FTSE Actuaries Share Indices.

Closing mid-prices are shown in pence unless otherwise stated. For FTSE 100 index constituents and reserves contained in the Trading Volume table on the LSE page, last trade prices at or prior to 4:30pm market close are shown, as these shares are now traded on the Stock Exchange Electronic Trading System ("SETS"). Highs and lows are based on intra-day mid-prices/last trades over a rolling 52 week period.

Trading Volumes are end of day accumulated totals. Dashes indicate that either no trade has taken place during the day or the data is not available for those particular securities. Volumes shown for foreign securities are based on London trading.

Where stocks are denominated in currencies other than sterling, this is indicated after the name. Prices shown for some of these foreign securities are converted into sterling from latest available local Stock Exchange prices.

Symbols referring to dividend status appear in the notes column daily as a guide to yields and P/E ratios. Dividends and Dividend covers are published on Monday.

Earnings used in calculations are based on IIMR 'Headline Earnings' formula.

Price/earnings ratios are based on latest annual reports and accounts and, where possible, are updated on interim figures.

Yields are based on mid-prices, are gross, adjusted for a dividend tax credit of 20 per cent (except where payment is due after 6/4/99 when no tax credit will be applied) and allow for the value of declared distribution and rights.

Estimated Net Asset Values (NAVs) are shown for Investment Trusts, in pence per share, along with the percentage discounts (Dis) or premiums (Pm -) to the current closing share price. The NAV basis assumes prior charges at par value, convertibles converted and warrants exercised if dilution occurs.

- * Highs and lows marked thus have been adjusted to allow for capital changes
- † Interim since increased or resumed
- ‡ Interim since reduced, passed or deferred
- ♦ Figures or report awaited
- ♥ Rule 2 1(a)(iv) Overseas incorporated companies listed on an approved exchange.
- ♣ Free annual/interim report available, see details below.
- ‡‡ Rule 4.2(a) Irish incorporated non-listed companies.
- ‖ Price at time of suspension
- ¶ Indicated dividend yield after pending scrip and/or rights issue
- ♦ Merger bid or reorganisation in progress
- § Forecast dividend yield, p/e based on earnings updated by latest interim statement.
- ♠ Unregulated collective investment schemes.

This service is available to companies whose shares are regularly traded in the United Kingdom for a fee of £1870 a year for each security shown, subject to the Editor's discretion

♣ FT Free Annual Reports Club

You can obtain the current annual/interim report of any companies annotated with the ♣. Ring 0181 770 0770 (open 24 hours including weekends) or Fax 0181 770 3822. Reports may also be ordered via the Internet at http://www.icbinc.com. All reports will be sent the next working day, subject to availability.

FT Cityline

Up-to-the-second share prices are available by telephone from the FT Cityline service. See Monday's share price pages for details. Calls are charged at 50p per minute at all times.

An international service is available for callers outside the UK, annual subscription £250 stg. Please consult your financial adviser and verify financial pricing information obtained via FT Cityline before making any investment decision.

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Call 0171 873 4378 for more information on FT Cityline.

For Retail Price Index details call 0891 43 0806

The FT web site

London share prices are available throughout the trading day with a 20 minute delay from our web site, http://www.ft.com, which also has the closing share prices printed on these pages.

LONDON STOCK EXCHANGE

Wall Street wobble reverses record challenge

MARKET REPORT
By Steve Thompson, UK Stock Market Editor

An unhappy start to the session by Wall Street, amid revived concerns about Brazil and its debt burden, brought an abrupt halt to an earlier positive performance by London's equity market.

Dealers said Wall Street was also reflecting unease about the start of the US reporting season.

The US weakness, which saw the Dow Jones Industrial Average down 80 as trading in London came to a close, meant earlier gains in UK stocks were gradually whittled away to be replaced by some sizeable losses.

At the finish of a session that featured heavy trading volumes, the FTSE 100 index was down 51.4 at 6,033.6.

Earlier the index had given another good performance, resuming its upward path and racing 55 higher as it looked set to challenge its all-time intra-day and closing highs.

The junior FTSE indices suffered along with the 100. The 250 index closed a net 4.9 easier at 4,977.1, having reached 4,988.9 shortly before US markets opened. And the FTSE SmallCap settled 1.7 down at 2,139.8.

Despite the widespread losses in London, dealers remained reasonably confident about the market's ability to absorb bouts of selling pressure like yesterday.

A senior marketmaker said: "The market still feels pretty decent underneath because of the weight of money still coming in and the prospect of more corporate activity. But it won't go up in a straight line – far from it. There will be plenty of hiccoughs along the way," he said.

The market also had to face up to another burst of profit warnings, mostly concentrated among the smaller stocks.

There was severe pain for shareholders in Allied Domecq, the drinks group, which warned of lower profits from its pubs and also spoke about the erosion of consumer confidence.

Diageo shares suffered in sympathy and were also unsettled by more worries that LVMH may unload some of its Diageo shares. Bass also came under fire, as did Scottish & Newcastle.

The lack of confidence in the retailing areas of the market was reinforced by the latest survey carried out for the British Retail Consortium, which showed like-for-like sales in December unchanged on last year.

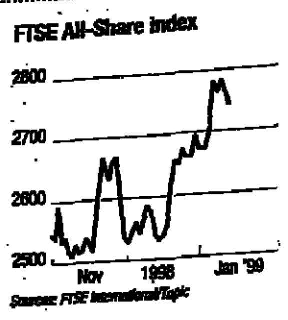
Trading updates from the retailers continued to come thick and fast. Kingfisher gave a generally satisfactory update, but fears that the sports retail area is suffering a sharp decline were confirmed by a profits warning issued by JJB Sports.

A sharp sell-off in gilts, said by some to have been triggered by a report that UK gross domestic product could rise by 1.5 per cent this year, also caused some anxiety.

There were no bids or mergers to equal the BAT/Rothmans or Imetal/English China Clay deals unveiled on Monday, but there was plenty of actual and rumoured takeover activity among the midcap and smaller stocks.

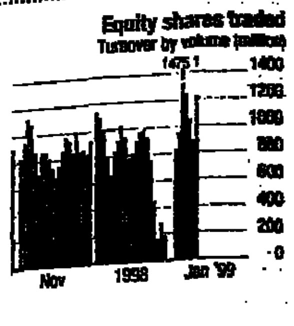
The nearest thing to bid action in the leaders was talk that a link up of the defence businesses of GEC and Thomson-CSF of France could be imminent. Turnover in equities was a heavy 1.2bn shares.

FTSE All-Share Index



Sources: FTSE International/Topic

Equity shares traded
Turnover by volume (million)



Indices and ratios

FTSE 100	6033.6	–51.4
FTSE 250	4977.1	–4.9
FTSE 350	2843.3	–21.0
FTSE All-Share	2743.33	–19.40
FTSE All-Share yield	2.86	2.84
FT 30	3601.9	–39.3
FTSE Non-Fins p/e	23.77	23.96
FTSE 100 Fut Mar	6053.0	–70.0
10 yr Gilt yield	4.50	4.44
Long gilt/equity yld ratio	1.57	1.56

Best performing sectors

1 Extractive Industries +3.7
2 Tobacco +3.1
3 Retailers: Food +2.3
4 Chemicals +2.1
5 Resources +1.5

Worst performing sectors

1 Alcoholic Beverages –4.0
2 Breweries: Pubs & Rest –3.5
3 Pharmaceuticals –3.2
4 Consumer Goods –2.7
5 Food Producers –2.6

Allied Domecq plunges

COMPANIES REPORT
By Joel Kibazo, Peter John and Bertrand Benoit

A profits warning from spirits and pubs group Allied Domecq sent the drinks sector reeling and left the company's shares plunging as analysts slashed profit forecasts.

At its annual meeting, the group said pub sales over the Christmas period were lower than last year, and that first-half pub profits would be lower than the corresponding period. Allied also warned it expected full-year profits from its pubs business to be lower.

One sector specialist said: "The poor Christmas sales are hardly a surprise, but the company appears to be even more bearish than the statement it published."

At the day's worst, the shares were down 92 at 505p, but they were later assisted by bargain-hunting that saw them close 81½ or 13.6 per cent down at 516p, by far the worst performer in the FTSE 100. Volume was 9.3m.

Many analysts downgraded current year profits estimates from around £621m to about £590m.

Nick Williamson at Credit Lyonnais Securities is even more bearish, predicting profits of £575m, and he is advising clients to reduce holdings. He said: "I don't think the areas highlighted by Allied are a surprise, but the magnitude of the difficulties over the Christmas period does not bode well for other drinks operators."

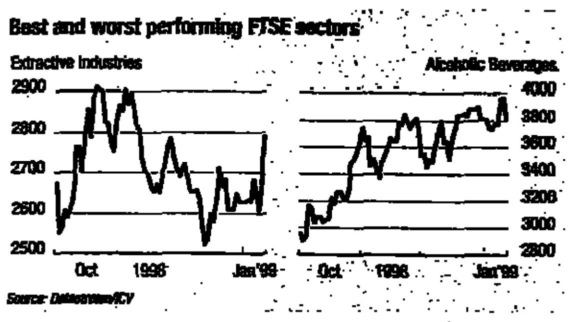
Rival spirits group Diageo initially tumbled on the release of the Allied statement. However, dealers worried about trading in the Latin America region indicated such concerns had already been discounted. Having fallen to 675p, the shares bounced to close 12 off at 695p.

Reuters Group, the news and information company, hit a 15-month high as brokers recommended the stock in their nap lists for 1999.

Dresdner Kleinwort Benson included the stock in a list of 25 preferred European shares expected to outperform in the coming year.

The comment follows tips from two US brokers. Salomon reiterated its positive stance on Reuters in a comprehensive review of media stocks. The broker said: "In addition to being the most geared currency play in the sector, at the revenue level, underlying growth will benefit from the recently announced price increases."

Best and worst performing FTSE sectors



Source: Datastream/ICV

Research from Lehman Brothers similarly tips Reuters as well as Flextech and Carlton Communications.

Salomon also recommends WPP and Pearson, which was boosted by a note from Goldman Sachs after the broker initiated coverage with a "buy" recommendation up to £13.50 a share.

Reuters, which announced on Monday it had bought US-based VentureOne, a provider of information and research to the venture capital industry, rose 16½ to 779p. Brian Newman of Henderson Crosthwaite said: "This is the classic Eurostock with common pricing, common invoicing and a single multi-lingual help desk. This is a £10 stock by the end of the year."

Elsewhere, Carlton lifted 14½ to 555p and Flextech 1¼ to 611½p, but Pearson, which owns the Financial Times, shed 2 to £12.93.

Rio Tinto, one of the world's biggest mining companies, jumped 31 to 736½p as CSFB, the house broker, reiterated its support.

Elsewhere in the sector, Billiton saw unusually heavy trade of 27m shares and a rise of 3¼ to 122p.

BAT jumped another 28¼ to 653¾p in further reaction to Monday's surprise news that the company is taking over Rothmans International to create a £15bn company.

Charles Pick at WestLB Panmure said: "We were positive on BAT pre and post the demerger of Allied Zurich but see this merger as another leg up for sentiment over the next year." The broker expects fair value targets to move ahead to 650p-700p against 600p previously.

Generators were sparky as Credit Lyonnais Securities pointed out the low valuations in its latest sector review. PowerGen added 10 at 790p and National Power 1½ at 513½p.

Lasmo, the oil exploration and production group, slipped back 2¼ to 104p as conviction that the company is poised to link with Enterprise began to crumble. CSFB says: "We currently rate the chances of a deal being done with Enterprise at no more than 50 per cent."

BP bucks trend

BP Amoco bucked the soggy trend in the oil sector on heavy turnover as institutions continued to adjust their weighting in the stock, now the biggest in the UK by market capitalisation. Turnover of 32m made it the busiest in the Footsie with a rise of 17¼ to 906½p.

The warning from Allied prompted a wave of selling in other drinks-related stocks. Bass gave up 74¼ to 805p, while Scottish & Newcastle surrendered 25½ to 713p. Nervous trading in Whitbread ahead of today's trading update left the shares 10½ lighter at 767½p.

A poor trading statement from Old English Pub Company saw the shares give up 48 to 262½p. The company said December sales were down 2.9 per cent.

A broker's recommendation made food retailer Tesco the toast of the market. The shares gained 9¾ or 5.4 per cent to 185¾p.

Deutsche Morgan Grenfell yesterday joined the growing list of Tesco fans when it upgraded its recommendation on the stock from "neutral" to "outperform", saying the UK food sector is unlikely to witness a price war as capacity is growing with demand.

"With a 10 to 13 per cent per annum pre-tax profits growth rate forecast in the next three to four years, combined with excellent management, we see Tesco as the most attractive play in the UK and the European food retail sector."

Morgan Stanley Dean Witter, one of the company's brokers, last week published a bullish note on the stock, while Credit Lyonnais Securities said this week it was positive on the retailers.

Chemicals were under pressure as Ellis & Everard warned tough trading conditions in the short-term and restructuring costs would hold back full-year profits. The warning undermined a first-half rise in profits to £17m from £16.5m. It fell 17¼ to 201p.

On-Line, the computer games developer, gained 16 to 45¼p, 2.5 times its Friday closing price. The company, which attributed the rise to speculative buying, said two directors had sold £51,500 worth of On-Line shares over the past two days.

FT 30 INDEX

	Jan 12	Jan 11	Jan 8	Jan 7	Jan 6	Yr ago	*High	*Low
FT 30	3601.9	3641.2	3663.1	3632.6	3669.6	3262.9	4004.9	2790.6
Ord. div. yield	2.87	2.84	2.82	2.84	2.81	3.44	4.22	2.72
P/E ratio net	23.37	23.62	23.80	23.64	23.89	21.09	25.41	15.80
P/E ratio nil	23.28	23.52	23.70	23.54	23.79	20.80	25.19	15.71

FT 30 since compilation: high 4084.9 7/15/98, low 49.4 6/26/40 Base Date: 1/7/35

FT 30 hourly changes

9	10	11	12	13	14	15	16	High	Low
3641.2	3605.7	3664.5	3649.3	3654.6	3634.7	3613.6	3602.1	3680.9	3598.8

STOCK MARKET TRADING DATA

	Jan 12	Jan 11	Jan 8	Jan 7	Jan 6	Yr ago
SEAQ bargains	75,803	77,314	81,414	87,212	87,857	55,428
Equity turnover (£m)†	-	3902.2	4691.5	6554.8	5283.0	2315.4
Equity bargains†	-	64,846	69,544	77,494	78,841	51,773
Shares traded (mil)†	-	1005.4	1090.2	1893.6	1258.5	684.0
Total market bargains‡	-	74,137	80,650	88,149	88,424	-
Total turnover (£m)‡	-	4603.8	5768.5	7605.2	6412.8	-
Total shrs traded (mil)‡	*1209.5	1164.2	1293.3	2117.2	1493.0	-
Tradepoint turnover (£m)	31.4	23.6	32.6	27.5	42.1	32.7
Tradepoint shrs traded(m)	12.4	9.3	14.4	12.2	16.5	9.7

†Excluding intra-market and overseas turnover but including Crest turnover. *UK only total at 6pm. ‡ UK plus intra-market turnover.

London market data

Rises and falls*		52 Week highs and lows		LIFFE Equity options	
Total Rises	671	Total Highs	70	Total contracts	51,609
Total Falls	838	Total Lows	56	Calls	23,354
Same	1,392			Puts	28,255

Jan 12 *Data based on Equity shares listed on the London Share Service.

FUTURES AND OPTIONS

■ FTSE 100 INDEX FUTURES (LIFFE) £10 per full index point

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Mar	6140.0	6053.0	-70.0	6170.0	6031.0	29298	174441
Jun		6096.0	-70.0			0	15290
Sep	6223.5	6141.0	-82.5	6223.5	6198.0	750	0

■ FTSE 250 INDEX FUTURES (LIFFE) £10 per full index point

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Mar		5020.0	-9.0			0	8933

■ FTSE 100 INDEX OPTION (LIFFE) (*6033) £10 per full index point — Jan 12

	5850 C	5850 P	5900 C	5900 P	5950 C	5950 P	6000 C	6000 P	6050 C	6050 P	6100 C	6100 P	6150 C	6150 P	6200 C	6200 P
Jan	190	11½	147½	18½	109	28½	75	46	48	70	28½	103½	15	147	7	197
Feb	372	163½	335	177	305½	197	276	216½	248½	236	217	256½	189	279½	167½	307½
Mar	457	259	498	279	465½	299	372	318½	341½	338½	388½	358½	276	379	253½	406½
Apr	574	352	535½	363½	497½	378	459½	388½	422	402	385	416	349½	431	316½	451
Jun†			649	453½			698	498			527½	537½			483	579½

Calls 2,487 Puts 1,234

■ EURO STYLE FTSE 100 INDEX OPTION (LIFFE) £10 per full index point — Jan 12

	5875 C	5875 P	5925 C	5925 P	5975 C	5975 P	6025 C	6025 P	6075 C	6075 P	6125 C	6125 P	6175 C	6175 P	6225 C	6225 P
Jan	167½	13	125	20½	88½	34	58	53½	35½	81	20½	116	10½	156	5	208½
Feb	350½	163½	377½	180½	289½	199	258½	221	230	241½	280½	262½	176	287½	151½	312½
Mar	436	260	403½	277	373	296	342½	315	314½	336½	284	355	259	379½	234½	404½
Jun			612½	446			569	490			580	538			442	558
Sept†			773½	586			715	604			658	642½			605	685½

Calls 9,880 Puts 14,615 * Underlying index value. Premiums shown are based on settlement prices. † Long dated expiry months.

LONDON RECENT ISSUES: EQUITIES

Issue price p	Amt paid up	Mkt. cap (£m.)	1998/9 High	1998/9 Low	Stock	Close price p	+/-	Net div.	Div. cov.	Grs yld	P/E net
–	F.P.	15.0	100	95	AIM VCT	100		–	–	–	–
–	F.P.	–	95½	91½	Abbey Natl Dublin	92½		–	–	–	–
§	F.P.	36.5	123	116½	BFS O'seas Inc	121½		Wr12.65	–	10.4	–
§	F.P.	3.96	101½	58	Do Cap	99		–	–	–	–
–	F.P.	5.88	117½	65	†Chemid	117½		–	–	–	–
§	F.P.	6.10	117	107	Collective Assets Tst	117		–	–	–	26.3
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
–	F.P.	8.02	100	90½	Piccadilly Growth	97		1.6	0.8	2.1	76.1
100	F.P.	–	103	92	REXAM B	96		–	–	–	–
§	F.P.	15.0	100	100	Singer&Frd AIM VCT	100		–	–	–	–
–	F.P.	2.51	85	75	Willington	77½		F6.0	2.7	7.7	3.2
–	F.P.	–	16½	5	Xenova Warrants	15		–	–	–	–
–	F.P.	25.4	92	87¾	Yeoman II IT Inc	91½	+1	W9.8	–	10.7	–
–	F.P.	9.15	8	5½	Do Cap	6		–	–	–	–
–	F.P.	29.9	113	102	Do Zero Div Prf	112½		–	–	–	–
–	F.P.	–	97	95	Do Equity Units	97	+½	–	–	–	–

† Alternative Investment Market. § Placing price. * Introduction. For a full explanation of all other symbols please refer to The London Share Service notes.

FTSE GOLD MINES INDEX

	Jan 11	% chg on day	Jan 8	Year ago	Gross div yield %	Total return	52 week High	52 week Low
Gold Mines Index (29)	1046.27	0.5	1040.86	881.23	1.72	1091.41	1351.57	701.58
■ Regional Indices								
Africa (9)	1088.70	–3.0	1120.11	929.96	3.59	1097.55	1488.04	765.63
Australasia (9)	1250.85	0.9	1240.19	1056.57	2.46	1260.39	1600.53	815.93
Americas (11)	1007.02	2.0	987.23	864.86	0.75	1009.13	1317.41	647.69

 Figures in brackets show number of companies. Basis US Dollars. Base Value: 1000.00 31/12/92. † Partial. Latest prices were unavailable for this edition.

FTSE Actuaries Share Indices — The UK Series

Produced in conjunction with the Faculty and Institute of Actuaries

	£ Stlg Jan 12	Day's chge%	Euro Index	£ Stlg Jan 11	Year ago	Gross yield%	Net yield%	Net cover	P/E ratio	Xd adj. ytd	Total Return
FTSE 100	6033.6	–0.8	6640.1	6085.0	5083.9	2.71	2.32	1.89	24.38	1.34	2671.95
FTSE 250	4977.1	–0.1	5477.4	4982.0	4816.5	3.36	2.88	2.14	17.43	1.10	2165.64
FTSE 250 ex Inv Tr	4981.6	–0.1	5482.3	4986.0	4861.4	3.50	3.02	2.22	16.08	1.03	2177.15
FTSE 350	2843.3	–0.7	3129.2	2864.3	2452.3	2.81	2.40	1.84	22.89	0.63	2573.76
FTSE 350 ex Inv Tr	2849.8	–0.7	3136.2	2871.1	2458.2	2.82	2.41	1.85	22.75	0.63	1323.20
FTSE 350 Higher Yield	2626.7	–0.2	2890.7	2633.3	2453.9	3.94	3.35	1.83	17.30	0.55	2041.55
FTSE 350 Lower Yield	3073.5	–1.2	3382.5	3110.9	2465.3	1.70	1.47	2.17	33.93	0.72	2251.05
FTSE SmallCap	2139.77	–0.1	2354.86	2141.51	2340.11	3.80	3.13	2.06	15.95	2.20	1891.72
FTSE SmallCap ex Inv Tr	2096.42	....	2307.16	2097.17	2348.53	4.06	3.35	2.18	14.13	2.24	1874.53
FTSE All-Share	2743.33	–0.7	3019.10	2762.73	2398.94	2.86	2.44	1.94	22.52	0.71	2520.49
FTSE All-Share ex Inv Tr	2753.67	–0.7	3030.48	2773.45	2402.86	2.87	2.45	1.96	22.20	0.70	1301.77
FTSE Fledgling	1180.46	–0.1	1299.12	1181.32	1272.09	4.26	3.45	1.33	22.11	0.92	1330.27
FTSE Fledgling ex Inv Tr	1185.60	—	1304.78	1185.06	1301.84	4.89	3.96	1.37	18.70	0.95	1343.54
FTSE All-Small	1215.07	–0.1	1337.21	1216.04	1325.07	3.90	3.20	1.89	16.93	1.19	1371.26
FTSE All-Small ex Inv Tr	1213.86	—	1335.90	1214.12	1354.83	4.22	3.47	1.99	14.85	1.23	1380.35
FTSE AIM	812.8	–0.3	894.6	815.3	980.3	1.31	1.04	1.00	80.00†	0.20	756.08

■ FTSE Actuaries Industry Sectors

	£ Stlg Jan 12	Day's chge%	Euro Index	£ Stlg Jan 11	Year ago	Gross yield%	Net yield%	Net cover	P/E ratio	Xd adj. ytd	Total Return
10 RESOURCES(18)	4093.86	+1.5	4505.39	4033.66	4295.39	3.55	3.09	1.17	30.13	0.00	1910.53
12 Extractive Industries(6)	2786.90	+3.7	3067.04	2688.75	2782.39	4.92	4.52	1.99	12.79	0.00	898.90
15 Oil, Integrated(3)	4787.03	+1.3	5268.24	4723.72	4756.00	3.40	2.84	1.06	34.58	0.00	2297.90
16 Oil Exploration & Prod(9)	1410.32	–0.1	1552.10	1411.64	3374.68	3.95	3.45	0.97	32.65	0.00	883.20
20 GEN INDUSTRIALS(192)	1776.00	+0.3	1954.53	1770.15	1954.50	4.11	3.66	2.24	13.55	0.99	1063.60
21 Construction(37)	1242.04	+0.2	1366.89	1239.76	1298.89	4.11	3.34	3.02	10.08	0.48	1127.22
22 Building Matls & Merchs(34)	1526.01	–0.3	1679.41	1530.91	1661.47	4.95	4.28	2.11	11.85	0.33	851.40
23 Chemicals(20)	1837.08	+2.1	2021.75	1798.74	2486.48	4.95	4.67	1.84	13.68	0.09	955.12
24 Diversified Industrials(4)	1108.56	–0.4	1219.99	1112.67	1252.50	5.85	5.06	1.65	12.94	0.00	703.62
25 Electronic & Elect Equip(25)	2818.20	+1.3	3101.49	2781.88	2175.54	2.71	2.31	1.99	23.17	0.00	1579.35
26 Engineering(54)	2268.75	–0.4	2496.81	2278.79	2692.72	4.26	3.82	2.23	13.16	2.78	1495.32
27 Engineering, Vehicles(10)	3537.54	–0.1	3893.15	3540.29	3451.27	2.53	2.32	3.23	15.29	0.00	1971.10
28 Paper, Pckg & Printing(18)	1568.31	+1.3	1725.96	1548.14	2106.33	6.66	6.19	2.36	7.94	2.42	725.42
30 CONSUMER GOODS(82)	6341.23	–2.7	6978.67	6516.36	5009.16	2.14	1.94	1.92	30.34	0.25	2536.40
32 Alcoholic Beverages(5)	3811.79	–4.0	4194.96	3970.12	3307.62	3.24	3.02	2.13	18.11	0.34	1528.21
33 Food Producers(26)	3740.48	–2.6	4116.48	3840.55	3336.62	2.40	2.88	2.31	22.56	0.10	1833.56
34 Household Goods & Texts(14)	2051.42	+0.2	2257.63	2046.70	3039.22	4.98	4.51	1.96	12.77	0.80	881.21
36 Health Care(14)	2466.72	–0.7	2714.68	2484.56	2254.25	2.10	1.93	2.11	28.30	0.86	1593.71
37 Pharmaceuticals(20)	11522.77	–3.2	12681.07	11902.13	8383.16	1.53	1.43	1.61	50.94	0.08	4152.34
38 Tobacco(3)	7702.28	+3.1	8476.54	7472.07	4786.86	4.45	3.72	2.04	13.73	0.00	2194.68
40 SERVICES(268)	3630.96	–0.7	3995.95	3656.15	2860.07	2.37	1.98	2.10	25.13	2.23	2021.28
41 Distributors(26)	1840.58	–0.2	2025.60	1844.73	2517.18	5.16	4.28	2.01	12.08	1.72	739.46
42 Leisure & Hotels(31)	3356.08	–0.3	3693.45	3365.61	3438.51	2.74	2.42	2.85	16.03	14.89	1926.46
43 Media(47)	4548.49	+0.6	5005.72	4521.04	4033.92	2.28	1.93	2.15	25.55	0.08	1738.57
44 Retailers, Food(13)	2850.30	+2.3	3136.82	2785.29	2748.51	3.21	2.57	2.14	18.18	0.00	1965.77
45 Retailers, General(42)	2079.24	–1.1	2288.25	2103.19	2303.08	3.60	2.89	2.09	16.61	3.38	1288.46
46 Telecommunications(7)	5794.51	–1.5	6376.99	5879.93	2738.09	1.55	1.27	1.59	50.70	0.00	2856.29
47 Breweries, Pubs & Rest.(24)	3525.92	–3.9	3880.36	3667.82	3547.92	3.56	2.89	2.22	15.82	7.66	1833.65
48 Support Services(69)	4896.78	–0.5	5389.02	4919.60	3617.86	1.28	1.09	2.77	35.30	0.37	3245.77
49 Transport(29)	3449.98	–0.5	3796.78	3469.04	2894.11	3.04	2.58	2.10	19.62	0.88	1558.06
60 UTILITIES(20)	4163.76	–0.9	4582.31	4199.63	3869.81	3.85	3.28	1.67	19.39	0.00	2025.88
62 Electricity(7)	4773.62	–0.6	5253.47	4802.15	4073.91	4.23	3.44	1.71	17.26	0.00	2851.65
64 Gas Distribution(2)	3301.48	–1.6	3633.35	3354.74	2677.35	2.05	1.64	‡	‡	0.00	1924.44
68 Water(11)	3339.59	–0.6	3675.30	3359.22	3379.97	5.02	4.63	2.38	10.49	0.00	2105.61
69 NON-FINANCIALS(800)	2785.33	–0.8	3076.33	2818.31	2413.10	2.79	2.40	1.89	23.77	0.93	2307.57
70 FINANCIALS(120)	5271.43	–0.4	5801.33	5292.73	4755.90	3.13	2.59	2.16	18.50	0.12	2468.60
71 Banks, Retail(12)	7843.91	–0.2	8632.41	7857.54	6889.78	3.27	2.61	2.14	17.87	0.00	2780.87
73 Insurance(21)	2338.59	–1.7	2573.68	2379.11	2168.73	3.04	2.86	1.91	21.58	0.12	1980.94
74 Life Assurance(8)	7694.74	–0.4	8468.24	7728.51	6152.74	2.51	2.18	2.70	18.50	0.00	3468.75
77 Other Financial(31)	3804.27	–0.6	4186.69	3828.02	3755.37	2.91	2.40	2.53	16.98	0.87	2350.56
79 Property(40)	1768.36	+0.2	1946.12	1764.54	2192.75	3.54	3.01	1.60	22.07	0.08	1178.50
80 INVESTMENT TRUSTS(117)	3692.42	–0.3	4063.59	3703.21	3377.30	2.27	1.87	1.15	48.05	1.59	1358.82
89 FTSE All-Share(837)	2743.33	–0.7	3019.10	2762.73	2398.94	2.86	2.44	1.94	22.52	0.71	2520.48
105 FTSE All-Share ex Inv Tr(720)	2753.67	–0.7	3030.48	2773.45	2402.86	2.87	2.45	1.96	22.20	0.70	1301.77
Information Technology	1597.56	–0.7	1758.15	1608.94	1044.26	0.59	0.48	4.20	50.31	0.00	1605.96

■ Hourly movements

	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.10	High/day	Low/day
FTSE 100	6088.1	6126.6	6117.5	6107.1	6122.0	6088.0	6049.8	6042.9	6140.3	6024.5
FTSE 250	4983.3	4981.8	4981.6	4983.5	4986.1	4987.2	4980.3	4978.1	4988.9	4976.2
FTSE 350	2884.9	2880.9	2877.3	2873.3	2879.5	2865.9	2849.7	2847.1	2886.4	2839.8
FTSE SmallCap	2140.93	2140.66	2141.32	2141.76	2141.97	2141.36	2140.03	2139.55	2142.39	2139.53
FTSE All-Share	2783.20	2777.93	2774.63	2770.98	2776.69	2764.22	2749.20	2746.80	2782.97	2740.10

Time of FTSE 100 Day's high: 10:28:45 Day's low: 16:10:30. FTSE 100 1998 High: 6179.0 (20/07/98) Low: 4648.7 (05/10/98)
Time of FTSE All-Share Day's high: 10:27:00 Day's low: 16:10:00. FTSE All-Share 1998 High: 2885.20 (20/07/98) Low: 2105.97 (05/10/98)

Further information is available on http://www.ftse.com.
 † Sector P/E ratios greater than 80 are not shown. ‡ Values are negative. Name change: Old: File Ideas. New: File Group (FTSE Fledgling).

FTSE INTERNATIONAL

TRADING VOLUME

■ Major Stocks yesterday.

	Vol 000's	Closing price	Day's change
3i	2,300	645½	–8
AMVESCAP	1,300	545	–20½
ASDA Group	15,300	161	+1
Abbey National	2,500	1297	–9
Alliance & Leicester	896	858	–16½
Allied Domecq	9,300	516	–81½
[illegible]	[illegible]	[illegible]	[illegible]

هكذا من الاصل

Highs & Lows shown on a 52 week basis

WORLD STOCK MARKETS

EUROPE (EMU) Prices in €

AUSTRIA (Jan 12 / 1 € = 13.7603 Sch)

BELGIUM/LUX (Jan 12 / 1 € = 40.3399 Frs.)

FINLAND (Jan 12 / 1 € = 5.94573 Mka)

FRANCE (Jan 12 / 1 € = 6.55957 Frs.)

GERMANY (Jan 12 / 1 € = 1.95583 Dm.)

IRELAND (Jan 12 / 1 € = 0.78756 Punt)

ITALY (Jan 12 / 1 € = 1936.27000 Lire)

NETHERLANDS (Jan 12 / 1 € = 2.20371 Fl.)

PORTUGAL (Jan 12 / 1 € = 200.48200 Esc.)

SPAIN (Jan 12 / 1 € = 166.38600 Pts.)

EUROPE (NON-EMU)

CZECH REP (Jan 12 / Koruna)

DENMARK (Jan 12 / Kr)

GREECE (Jan 12 / Drachma)

NORWAY (Jan 12 / Kroner)

POLAND (Jan 12 / Zloty)

SWEDEN (Jan 12 / Kronor)

SWITZERLAND (Jan 12 / Frs.)

TURKEY (Jan 12 / Tk Lira)

PACIFIC

JAPAN (Jan 12 / Yen)

AUSTRALIA (Jan 12 / Aust$)

HONG KONG (Jan 12 / H.K.$)

INDONESIA (Jan 12 / Rupiah)

MALAYSIA (Jan 12 / MYR)

NEW ZEALAND (Jan 12 / NZ $)

SINGAPORE (Jan 12 / S$)

SOUTH KOREA (Jan 12 / Won)

TAIWAN (Jan 12 / TW $)

THAILAND (Jan 12 / Baht)

AMERICAS

CANADA

TORONTO (Jan 12 / Can $) 3:30 pm

MONTREAL (Jan 12 / Can $) 3:30 pm

MEXICO (Jan 12 / Peso) 12.30 pm

AFRICA

SOUTH AFRICA (Jan 12 / Rand)

FT/S&P ACTUARIES WORLD INDICES

The FT/S&P Actuaries World Indices are owned by FTSE International Limited, Goldman, Sachs & Co. and Standard & Poor's. The indices are compiled by FTSE International and Standard & Poor's in conjunction with the Faculty of Actuaries and the Institute of Actuaries.

NATIONAL AND REGIONAL MARKETS Figures in parentheses show number of lines of stock	MONDAY JANUARY 11 1999 US Dollar Index	Day's Change %	Pound Sterling Index	Yen Index	Euro Index	Local Currency Index	Local % chg on day	Gross Div. Yield	FRIDAY JANUARY 8 1999 US Dollar Index	Pound Sterling Index	Yen Index	Euro Index	Local Currency Index	DOLLAR INDEX 52 week High	52 week Low	Year ago (approx)
Australia (76)	211.87	1.2	191.51	146.41	211.52	219.79	-0.1	3.33	209.40	189.25	147.51	208.72	219.97	219.96	163.86	196.60
Austria (21)	184.08	-0.3	166.39	127.20	162.16	162.16	-0.1	2.15	184.65	166.88	130.07	162.40	162.40	253.73	166.45	189.41
Belgium (22)	421.71	-1.4	381.20	291.41	363.73	363.73	-1.3	1.86	427.90	386.72	301.42	368.47	368.47	446.95	250.39	253.90
Brazil (32)	119.57	-6.0	108.18	82.70	119.48	268.50	-6.1	3.39	127.39	115.13	89.73	126.97	283.72	269.34	102.68	210.06
Canada (117)	213.30	-0.3	192.81	147.40	212.95	232.84	-0.8	1.68	214.06	193.48	150.79	213.37	234.69	248.78	159.94	201.17
Denmark (34)	502.15	0.5	453.91	347.00	501.33	440.72	0.6	1.59	499.92	451.82	352.16	498.30	438.24	537.33	420.12	451.23
Finland (29)	619.44	-0.9	559.93	428.05	670.14	670.14	-0.7	1.50	624.91	564.78	440.20	674.98	674.98	624.91	267.59	279.83
France (75)	342.01	-1.1	309.15	236.34	305.11	305.11	-0.9	2.06	345.81	312.54	243.60	308.00	308.00	354.45	225.24	229.97
Germany (55)	288.89	-2.3	261.13	199.63	254.67	254.67	-2.2	1.27	295.77	267.31	208.35	260.32	260.32	325.61	218.59	226.11
Greece (36)	380.73	-1.6	344.15	263.09	380.11	766.17	-1.1	1.11	386.74	349.53	272.43	385.49	774.87	388.53	211.47	–
Hong Kong, China (67)	324.43	-0.7	293.26	224.19	323.90	322.73	-0.7	3.79	326.55	295.13	230.03	325.49	324.95	362.55	196.64	291.89
Indonesia (26)	54.15	-2.5	48.95	37.42	54.06	284.11	-2.9	1.16	55.57	50.22	39.14	55.38	271.85	64.52	19.04	31.77
Ireland (16)	574.13	-0.8	518.97	396.74	552.39	552.39	-0.7	1.71	579.04	523.32	407.89	556.21	556.21	605.85	395.98	404.73
Italy (53)	183.07	-2.6	165.49	126.51	229.53	229.53	-2.5	1.21	188.04	169.95	132.46	235.37	235.37	192.64	122.67	122.94
Japan (445)	100.68	1.9	91.01	69.57	100.52	69.57	-0.1	1.07	98.84	89.39	69.62	98.52	69.62	109.73	78.83	91.95
Mexico (29)	1027.23	-2.2	928.54	709.84	1025.55	11161.56	-0.9	2.30	1050.66	948.58	740.12	1047.26	11263.56	1733.73	787.15	1570.08
Netherlands (26)	519.88	-2.4	469.93	359.25	453.35	453.35	-2.3	2.09	532.84	481.57	375.35	463.90	463.90	582.73	391.03	400.86
New Zealand (18)	65.17	2.1	58.91	45.03	65.06	63.20	0.8	4.62	63.83	57.89	44.98	63.62	82.71	77.84	45.88	73.69
Norway (37)	247.53	-0.6	223.75	171.05	247.13	249.26	-0.7	2.32	249.02	225.06	175.42	248.22	251.04	357.71	181.86	298.66
Philippines (22)	96.39	0.2	87.13	66.61	95.23	180.86	-0.8	0.82	96.17	86.92	67.75	95.86	182.37	106.98	42.48	57.64
Portugal (18)	272.72	-0.9	246.52	188.46	324.46	324.46	-0.8	1.01	275.28	248.79	193.92	326.98	326.98	299.39	184.13	–
Singapore (41)	231.22	0.0	209.01	159.78	230.84	178.26	-0.2	1.59	231.28	209.02	162.92	230.53	178.68	246.74	102.45	159.25
South Africa (38)	198.27	-1.8	179.23	137.01	197.95	258.72	1.0	3.67	201.90	182.47	142.22	201.24	256.17	346.20	151.55	249.60
Spain (30)	409.92	-1.6	370.54	283.27	447.98	447.98	-1.4	1.81	416.44	376.37	293.35	454.37	454.37	435.19	274.42	276.24
Sweden (44)	536.82	-1.0	485.25	370.96	535.94	623.68	-1.9	1.83	542.49	490.29	382.14	540.73	638.08	628.19	379.18	462.43
Switzerland (30)	425.96	-2.1	385.04	294.35	425.26	369.08	-2.0	1.16	435.23	393.36	306.59	433.82	376.68	441.85	307.73	335.62
Thailand (35)	26.59	0.7	24.04	18.38	26.55	37.41	0.2	2.53	26.41	23.86	18.60	26.32	37.32	33.84	8.15	14.82
United Kingdom (207)	385.62	-0.9	348.57	266.47	384.99	348.57	-0.9	2.83	389.21	351.76	274.17	387.94	351.76	401.84	307.96	328.18
USA (616)	521.22	-0.8	471.15	360.18	520.37	521.22	-0.6	1.25	525.31	474.76	370.04	523.60	525.31	526.31	378.74	378.74
Americas (794)	462.65	-0.8	418.21	319.71	461.91	392.13	-0.8	1.28	466.36	421.49	328.52	464.85	385.31	466.36	343.40	343.40
Europe (733)	370.09	-1.5	334.54	255.74	369.49	339.03	-1.5	2.00	375.86	339.69	264.76	374.64	344.07	388.24	279.29	285.15
Eurobloc (345)	108.57	-1.9	98.14	75.03	103.59	103.59	-1.7	1.67	110.66	100.01	77.95	105.42	105.42	113.92	81.53	–
Nordic (144)	518.15	-0.7	468.37	358.06	517.31	516.99	-1.1	1.74	521.96	471.74	367.68	520.27	522.92	555.97	360.04	406.87
Pacific Basin (730)	109.63	1.5	99.10	75.76	109.45	79.35	-0.1	1.56	107.99	97.60	76.07	107.64	79.46	118.48	82.88	99.57
Euro-Pacific (1463)	217.93	-0.7	196.99	150.59	217.57	176.86	-1.1	1.87	219.42	198.31	154.56	218.71	178.81	221.79	166.00	176.86
North America (733)	508.46	-0.8	452.38	345.83	489.64	501.36	-0.8	1.27	504.30	455.78	355.24	502.66	505.29	504.30	367.38	367.39
Europe Ex. UK (526)	349.18	-1.8	315.64	241.29	348.61	323.89	-1.7	1.60	355.67	321.45	250.54	354.52	329.59	366.32	250.03	258.58
Europe Ex. Eurobloc (388)	99.53	-1.1	89.97	68.78	99.36	99.28	-1.2	2.35	100.69	91.00	70.93	100.36	100.47	103.93	77.40	–
Europe Ex. UK Ex. Eurobloc (181)	102.25	-1.6	92.42	70.65	102.08	98.26	-1.7	1.38	103.93	93.93	73.21	103.60	100.00	109.21	75.16	–
Pacific Ex. Japan (285)	193.29	0.3	174.72	133.57	192.98	195.43	-0.3	3.35	192.73	174.18	135.76	192.10	196.11	216.04	128.26	172.08
World Ex. Eurobloc (1950)	107.49	-0.5	109.19	88.32	107.31	105.21	-0.8	1.53	108.05	109.74	90.50	107.70	106.03	108.05	83.09	–
World Ex. US (1679)	217.04	-0.7	196.19	149.98	215.68	181.64	-1.1	1.89	218.60	197.57	153.99	217.89	183.64	221.91	165.85	180.16
World Ex. UK (2088)	308.29	-0.7	276.67	213.04	307.79	272.94	-0.9	1.41	310.55	280.67	218.76	308.54	275.49	311.48	234.66	236.38
World Ex. Japan (1850)	421.53	-1.0	381.03	291.29	420.84	410.75	-1.0	1.60	425.90	384.92	300.02	424.52	414.97	427.99	318.78	320.02
The World Index (2295)	314.98	-0.8	284.72	217.66	314.47	279.95	-0.9	1.55	317.36	288.82	223.55	316.32	282.56	318.51	242.08	243.98

 Name Change: Fortis Amev to Fortis (NL). Latest prices were unavailable for this edition.

Emerging markets: IFC Investable Indices

Dollar terms

3:30 pm January 12

NEW YORK STOCK EXCHANGE PRICES

1998/99 High	Low	Stock	Div	Yld %	P/E	Vol 100s	High	Low	Close Quote	Chng Prev. Close
[illegible]										

- A -
- B -
- C -
- D -
- E -
- F -
- G -
- H -
- I -
- J -
- K -
- L -
- M -
- N -
- O -
- P - Q -
- R -
- S -
- T -
- U -
- V -
- W -
- X - Y - Z -

Price data supplied by Exshare, part of FT Information.

Yearly highs and lows for NYSE reflect the period from Jan 1 1998. Unless otherwise noted, rates of dividend are annual disbursements based on the latest declaration. Volume figures are unofficial.

d-new yearly low. P/E price-earnings ratio. vol- volume. u-new yearly high. x-ex-dividend or ex-rights. yld-yield. z-sales in full. ‡ Dealings suspended.

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THE NASDAQ-AMEX

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GLOBAL EQUITY MARKETS

US INDICES

Dow Jones	Jan 11	Jan 8	Jan 7	1998/99 High	1998/99 Low	Since compilation High	Since compilation Low
Industrials	9619.89	9643.32	9537.76	9643.32 (8/1/99)	7539.07 (31/8/98)	9643.32 (8/1/99)	41.22 (8/7/32)
Home Bonds	106.49	106.38	106.43	107.17 (9/12/98)	104.42 (11/5/98)	107.17 (9/12/98)	54.99 (1/10/81)
Transport	3286.32	3360.28	3319.67	3686.02 (16/4/98)	2345.00 (8/10/98)	3686.02 (16/4/98)	13.23 (8/7/32)
Utilities	307.41	310.14	311.19	320.51 (8/10/98)	262.66 (9/1/98)	320.51 (8/10/98)	16.53 (8/7/32)

DJ Ind. Day's high 9751.46 (9759.44) Low 9446.36 (9447.91) (Theoretical♣)
Day's high 9643.32 (9647.96) Low 9532.61 (9525.41) (Actual♣)

Standard and Poors	Jan 11	Jan 8	Jan 7	1998/99 High	1998/99 Low	Since compilation High	Since compilation Low
Composite‡	1263.88	1275.09	1269.73	1275.09 (8/1/99)	927.69 (8/1/98)	1275.09 (8/1/99)	4.40 (1/6/32)
Industrials♥	1516.78	1527.38	1521.92	1530.43 (5/1/99)	1077.40 (9/1/98)	1530.81 (8/1/99)	3.52 (30/6/32)
Financial♥	136.68	138.87	137.82	147.88 (14/7/98)	95.80 (8/10/98)	147.88 (14/7/98)	7.13 (4/5/74)
Others							
NYSE Comp.	604.04	611.06	608.19	611.06 (8/1/99)	477.20 (8/10/98)	611.06 (8/1/99)	4.64 (25/4/42)
Amex Comp	707.32	707.76	703.98	753.67 (22/4/98)	583.75 (8/10/98)	753.67 (22/4/98)	534.20 (16/7/96)
NASDAQ Cmp	2384.59	2344.41	2325.09	2384.59 (11/1/99)	1419.12 (8/10/98)	2384.59 (11/1/99)	54.87 (3/10/74)
Russell 2000	433.13	431.23	427.83†	491.41 (21/4/98)	310.28 (8/10/98)	491.41 (21/4/98)	123.36 (7/12/93)

RATIOS

	Jan 8	Dec 31	Dec 24	Year ago
Dow Jones Ind. Div. Yield	1.58	1.66	1.65	1.81
	Jan 6	Dec 30	Dec 23	Year ago
S & P Ind. Div. yield	1.11	1.17	1.17	1.49
S & P Ind. P/E ratio	39.11	37.82	37.69	25.98

US DATA

MARKET ACTIVITY

● Volume (million)	Jan 11	Jan 8	Jan 7
NYSE	818.090	940.088	863.040
Amex	27.854	28.125	26.413
NASDAQ	1147.38	1288.47	1206.42

NYSE	Jan 11	Jan 8	Jan 7
Issues Traded	3,563	3,551	3,543
Rises	1,105	1,502	1,126
Falls	1,953	1,518	1,944
Unchanged	505	531	473
New Highs	54	96	86
New Lows	33	19	22

NYSE TRADING ACTIVITY — Volume : 818,090,000

ACTIVE STOCKS

Monday	Stocks traded	Close price	Day's change
AmOnLine	18,852,100	165	+20¼
Compaq	16,800,100	48⅝	+3
Disney	16,732,000	35¼	+2⅞
AT&T	10,125,500	85¾	+4
Citgrp	9,412,000	57¾	−⅛
GenMtr	7,727,100	86⅛	+6
Gillte	7,651,600	52⅛	+6⅞
Pepsico	7,219,300	40⅝	−½
AdvMic	6,883,400	31⅝	+3⅝
LucentTch	5,866,900	112⅞	−2⅛

BIGGEST MOVERS

Monday	Close price	Day's change	Day's chge %
Ups			
Gillte	52⅛	+6⅞	+14.9
AmOnLine	165	+20¼	+13.8
AdvMic	31⅝	+3⅝	+13.8
Barry	12⅛	+1⅛	+12.9
Downs			
Theragenic	10⅝	−5⅛	−33.8
CorpbIS	45⅛	−7	−13.4
Lehman	54⅞	−5⅛	−8.6
BrdlyW	29	−2⅝	−8.4

NASDAQ TRADING ACTIVITY — Volume :1,147,383,000

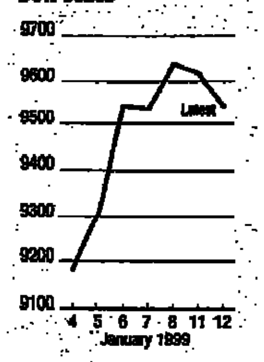
ACTIVE STOCKS

Monday	Stocks traded	Close price	Day's change
Intel	28,212,500	138⅛	+5⅝
AscendCom	17,885,700	76⅞	+5⅝
Amz.com	17,487,700	184⅝	+24⅝
CiscoSys	16,374,300	104⅞	−2
DellCmp	15,421,500	82	+4⅛
Excite	13,384,600	81	+21
Lycos	12,683,000	137	+39⅛
MCIWIcm	12,444,300	75	
Micsft	11,402,000	147⅝	−2⅝
Infoseek	11,082,500	87⅝	+32⅝

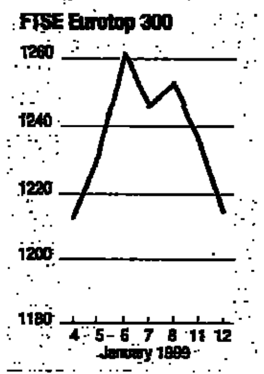
BIGGEST MOVERS

Monday	Close price	Day's change	Day's chge %
Ups			
Infoseek	87⅝	+32⅝	+59.2
Lycos	131	+39⅛	+42.8
CMG Info	272	+71⅝	+35.8
DoubleClic	78⅞	+20⅞	+35.7
Downs			
PacGtwy	31	−14⅞	−32.1
Amerco	23⅛	−3⅝	−13.8
PSS World	17⅝	−2⅛	−12.6
Romac	20⅝	−2⅝	−11.7

Dow Jones



FTSE Eurotop 300



JAPAN

	Jan 12	Jan 11	Jan 8	1998/99 High	1998/99 Low	Since compilation High	Since compilation Low
Nikkei 225	13360.97	13368.48	13391.81	17264.3	12880	38915.9	85.25

Day's high: 13535.68. Day's low: 13212.30.

TOKYO TRADING ACTIVITY — Volume : 361,430,000

ACTIVE STOCKS

Tuesday	Stocks traded	Close price	Day's change
MKTrB	9,821,000	110	−4
Sakura	9,174,000	257	+11
NEC	7,240,000	1130	+25
BTokM	6,751,000	1168	+11
SumTrB	6,613,000	270	−1
FujiBk	5,429,000	437	+10
Yuasa	5,260,000	297	−23
SumMtl	5,084,000	118	
NihElec	4,836,000	365	+1
SumBnk	4,784,000	1170	+45

BIGGEST MOVERS

Tuesday	Close price	Day's change	Day's chge %
Ups			
Nissho	402	+32	+8.6
SanwaBk	957	+49	+5.4
YoshPh	1279	+64	+5.3
ShinSan	234	+11	+4.9
Downs			
JGC	236	−19	−7.5
Yuasa	297	−23	−7.2
Mori S	1080	−73	−6.3
JpMtCh	198	−13	−6.2

GERMANY

	Jan 12	Jan 11	Jan 8	1998/99 High	1998/99 Low	Since compilation High	Since compilation Low
DAX	5200.10	5270.60	5392.84	6171.43	3896.08	6171.43	931.18

Day's high: 5316.30. Day's low: 5194.64.

FRANKFURT TRADING ACTIVITY — Volume : (m)

ACTIVE STOCKS

Tuesday	Stocks traded	Close price	Day's change
DaimCh	588,219	91.5	−0.6
Cmrzbk	498,377	27.3	−0.5
BASF	478,872	31.5	−0.25
Bayer	440,645	34.7	−1.2
Siemns	435,198	61.77	+0.67
Dt Bk	421,034	53.85	−2.2
Dt Tel	389,609	32.85	+0.95
Luftht	361,414	19.7	−0.4
Mannsm	282,026	113.5	+1.25
H'chst	257,245	34.85	−0.85

BIGGEST MOVERS

Tuesday	Close price	Day's change	Day's chge %
Ups			
Berlkr	25.95	+1.95	+7.8
Hochtf	32.3	+1.5	+4.9
Suedzk	355	+14	+4.1
SKW	21.6	+0.8	+3.8
Downs			
Merck	34.8	−2.7	−7.2
DrsdBk	39.3	−2.4	−5.8
Rentbl	69	−4	−5.5
SAP	295	−15	−4.8

FRANCE

	Jan 12	Jan 11	Jan 8	1998/99 High	1998/99 Low	Since compilation High	Since compilation Low
CAC 40	4100.70	4201.90	4245.42	4388.48	2862.54	4388.48	984.81

Day's high: 4213.67. Day's low: 4095.38.

PARIS TRADING ACTIVITY — Volume : 512,388,910

ACTIVE STOCKS

Tuesday	Stocks traded	Close price	Day's change
FrTele	1,933,215	71.8	−1.5
TotalB	1,838,459	94.2	+1.9
Axa	1,207,294	124.4	−3.5
Alcatel	926,916	112	−3
CapGem	907,033	136	−20
BNP	906,321	73.05	−4.95
EltAqu	877,027	106	+0.5
Renault	825,408	41.15	−0.92
RhonPA	792,082	45.2	−1.2
Usinor	709,610	10.83	−0.5

BIGGEST MOVERS

Tuesday	Close price	Day's change	Day's chge %
Ups			
Vivetel	98.9	+10.4	+11.6
Bygues	215	+14.5	+7.2
GalLaf	900	+57	+6.8
Clrgrs	53	+3	+6
Downs			
SAT	298.5	−56.5	−15.9
CapGem	136	−20	−12.8
GrdVsn	22.5	−2.3	−9.3
Legrnd	224.2	−19.8	−8.1

UK

	Jan 12	Jan 11	Jan 8	1998/99 High	1998/99 Low	Since compilation High	Since compilation Low
FTSE 100	6033.6	6065.0	6147.2	6179	4548.7	6179	986.9

Day's high: 6140.3. Day's low: 6024.5.

LONDON TRADING ACTIVITY — Volume : 1,200,590,000

ACTIVE STOCKS

Tuesday	Stocks traded	Close price	Day's change
Tesco	32,402,360	185½	+9½
BP Amoco	31,750,880	988½	+17½
Billiton	27,985,050	122	+3¼
Shell	24,815,850	349	−¾
Fortune	22,133,540	5¼	+¼
BTR	17,486,340	118½	−¼
ASDA	15,274,150	161	+1
Signet	14,578,050	39¼	+3¾
Northern Fds	14,540,810	125	+8
Lloyds TSB	13,970,440	864½	−4½

BIGGEST MOVERS

Tuesday	Close price	Day's change	Day's chge %
Ups			
On-Line	45½	+16	+54.2
Cortecs	26	+7¼	+38.7
Versailles	1	+¼	+33.3
Airtech	35½	+8	+29.1
Downs			
Riva Grp	21	−11	−34.4
Proteome Sci	9	−2	−18.2
Old Eng Pub	262½	−48	−15.5
Fair Cons	2¼	−½	−15.4

INDEX FUTURES

S&P 500	Open	Latest	Change	High	Low	Est. vol.	Open int.
Mar	1285.00	1266.50	−20.50	1277.50	1261.00	104,542	384,955
Jun	1274.50	1274.50	−24.70	1274.50	1274.50	104	7,024
Nikkei 225	**Open**	**Sett price**	**Change**	**High**	**Low**	**Est. vol.**	**Open int.**
Mar	13200.0	13380.0	−80.0	13550.0	13200.0	30,879	190,124
Jun	13250.0	13220.0	−40.0	13370.0	13110.0	1,100	29,947

CAC-40 (200 x Index)	Open	Sett Price	Change	High	Low	Est. vol.	Open int.
Jan	4195.0	4110.0	−90.0	4254.0	4107.0	75,679	56,591
Feb	4205.0	4120.0	−90.5	4226.0	4146.0	674	7,625
DAX							
Mar	5347.0	5230.0	−77.0	5368.0	5211.0	51,104	118,906
Jun	5343.5	5252.5	−79.5	5361.5	5239.0	2,429	6,619

OMX	Open	Sett Price	Change	High	Low	Est. vol.	Open int.
Jan	721.00	708.00	−15.50	728.50	708.00	29,903	184,272
Feb	724.00	711.50	−15.50	730.75	711.50	6,350	3,323
EUREX							
Mar	7530.0	7448.0	−67.0	7600.0	7392.0	37,580	135,531
Jun	7400.0	7396.0	−73.0	7400.0	7400.0	512	2,067

Open interest figures for previous day.

WORLD MARKETS AT A GLANCE

Country	Index	Jan 12	Jan 11	Jan 8	1998/99 High	1998/99 Low	✣ Yield	✣ P/E
Argentina	General	16301.92	16888.11	17368.89	23485.50 23/3/98	12303.10 10/9/98	4.29	11.4
♣Shares extended morning losses, echoing sharp falls in stock prices in Brazil.								
Australia	All Ordinaries	2846.3	2849.4	2856.3	2887.30 7/1/99	2458.20 1/9/98	3.29	22
	All Mining	613.5	594.6	583.4	713.18 23/4/98	499.80 31/8/98		
News Corp, AMP, telecoms and banks fell with weak bonds while resources jumped 3.7 per cent with firm commodity prices.								
Austria	Credit Aktien	(u)	(u)	(u)	584.34 26/5/98	345.44 9/10/98	1.99	12
	ATX Index	1127.60	1137.33	1141.50	1628.56 26/5/98	982.86 1/10/98		
Market dragged lower by weak international leads and approaching expiry of January futures and options contracts.								
Belgium	BEL20	3496.83	3540.30	3573.96	3681.92 6/1/99	2357.78 10/1/98	1.49	24
Market closed weak after slipping in and out of red during day's trade.								
Brazil	Bovespa	5875.0	6408.0	6781.0	12298.00 15/4/98	4761.00 10/9/98	na	na
♣Shares sharply lower as investors remained unnerved over Minas Gerais state's debt moratorium.								
Canada	TSE 100♦	414.97	419.09	421.37	475.63 25/5/98	324.91 5/10/98	1.69	19.1
	Metals Minls♦	3467.88	3519.97	3483.50	4380.91 10/3/98	2608.10 31/8/98		
	TSE300Comp♦	6777.70	6842.31	6868.93	7822.30 22/4/98	5335.78 5/10/98		
	Portfolio§§	3530.33	3564.32	3599.67	3985.81 25/5/98	2719.24 5/10/98		
♣Slumping resource shares, particularly gold issues, led market lower at midsession.								
Chile	IGPA Gen♥	3485.00	3529.79	3579.70	4861.95 17/3/98	2980.95 14/9/98	3.59	11.5
♣Market sharply lower at midsession, dragged down by uncertainty about Brazil's financial stability.								
China	Shanghai B	28.43	28.99	28.99	59.58 10/2/98	26.25 12/8/98	1.56	26.2
	Shenzhen B	52.09	52.71	53.34	98.97 10/2/98	48.88 13/8/98		
Hard-currency shares slipped in thin turnover with weaker renminbi-denominated markets.								
Colombia	IBB	1060.58	(c)	1075.40	1431.46 7/1/98	776.17 14/10/98	na	na
Czech Republic	PX 50	407.6	407.9	413.2	617.30 23/3/98	316.00 8/10/98	na	na
Shares closed mixed after weak opening on Wall Street put end to optimism after bourse recovered from morning losses.								
Denmark	CopenhagenSE	646.79	646.47	643.34	778.84 7/4/98	566.85 9/10/98	1.61	17.9
Blue chips edged lower, hit like much of Europe by concerns over outlook for Brazil.								
Egypt	Cairo SE Gen	401.06	396.42	(c)	401.06 12/1/99	346.40 2/2/98	na	na
Finland	Hex General	6055.45	6055.55	6091.08	6891.08 8/1/99	3220.43 12/1/98	1.77	22.4
Shares closed flat on day characterised by cautious trade after market gave up early 1.5 per cent advance.								
France	SBF 250	2592.03	2645.67	2669.99	2789.73 17/7/98	1873.10 12/1/98	2.21	21
	CAC 40	4100.70	4201.90	4245.42	4388.48 17/7/98	2862.54 12/1/98		
Investors consolidated cash gains following strong run at start of year.								
Germany♥	FAZ Aktien	1668.24	1687.11	1708.20	1940.80 20/7/98	1250.50 2/10/98	1.32	20.1
	Commerzbank	(u)	(u)	(u)	5712.60 20/7/98	3688.20 2/10/98		
	DAX‡	5200.10	5270.60	5392.84	6171.43 20/7/98	3896.08 8/10/98		
Market carried consolidation into second straight session and traders expected index to remain rangebound in short-term.								
Greece	Athens General	2983.34	2983.56	3010.48	3003.54 8/1/99	1389.13 29/1/98	1.47	24.7
	FTSE/ASE 20	1881.25	1882.41	1916.29	1910.26 8/1/99	765.18 29/1/98		
Early losses eased although banking sector continued to underperform.								
Hong Kong	Hang Seng	10711.56	10834.27	10722.70	11810.69 25/3/98	6660.42 13/8/98	3.38	14.4
	HSCC Red Chip	864.34	886.02	904.09	1776.09 27/2/98	576.87 1/9/98		
Rallied up from intraday low of 10,477. Hang Seng Bank and Hutchison Whampoa outpaced while China plays underperformed.								

Country	Index	Jan 12	Jan 11	Jan 8	1998/99 High	1998/99 Low	✣ Yield	✣ P/E
Hungary	Bux	6828.34	6841.09	6943.06	9016.36 23/4/98	3735.82 21/8/98	na	na
Shares edged lower with many investors cautious about stability of Brazil's economy.								
India	BSE Sens.	3353.22	3433.21	3397.84	4280.96 21/4/98	2764.16 20/10/98		
	Crisil 500	664.78	678.24	673.86	815.62 21/4/98	557.86 20/10/98	na	na
Shares weak but off lows on buying support from local institutions in closing minutes of trade.								
Indonesia	Jakarta Comp.	436.19	437.29	439.49	554.10 2/2/98	256.83 21/8/98	2.26	21.8
Drifted lower in thin volumes ahead of next week's Moslem festival. Indosat continued higher amid privatisation hopes.								
Ireland	ISEQ Overall	5233.87	5276.11	5285.89	5471.81 21/4/98	3745.11 8/10/98	1.88	19.4
Market closed weak, taking cue from lower London market and poor start on Wall Street.								
Israel	Tel Aviv 100	307.83	309.17	(c)	337.43 8/6/98	249.19 8/10/98	na	na
Shares lower for second straight day on worries over direction of Wall Street and concerns over domestic economic policy.								
Italy	BCI Comit 30	358.61	367.33	376.70	398.89 20/7/98	248.51 9/10/98	1.6	27.4
	Banca Com Ital	1527.5	1561.22	1598.68	1654.36 7/4/98	1083.50 9/10/98		
	Mibtel General	24119.0	24655.0	25178.0	26377.00 6/4/98	16761.00 9/10/98		
Worries over state of Brazil's economy left market to close easier but above lows.								
Japan	Nikkei 225	13360.97	13368.48	13391.81	17264.38 2/3/98	12880.08 9/10/98	1.01	43.9
	Nikkei 300	209.52	209.24	209.75	257.43 10/2/98	192.38 9/10/98		
	Topix	1055.93	1057.34	1059.40	1300.38 10/2/98	980.11 15/10/98		
	2nd Section	1159.25	1164.13	1161.49	1401.27 12/2/98	1028.84 13/10/98		
Fears of the effect of the firm yen on exporters kept buyers at bay and in broader market falls beat rises by 11 to 6.								
Jordan	Amman SE	173.01	174.07	(c)	184.52 17/8/98	168.46 18/11/98	na	na
Profits taken by jittery investors fearing further price slides after end of new year rally.								
Malaysia	KLSE Comp.	593.33	596.48	591.70	745.36 27/2/98	262.70 1/9/98	2.41	15.7
Broadly lower in thin trade. However, two stocks linked to new finance minister made good gains.								
Mexico	IPC	3487.74	3592.20†	3638.55	5204.00 2/1/98	2686.10 10/9/98	1.85	14.5
♣Shares heavily sold on fears of contagion from renewed heavy falls by Brazilian stocks.								
Morocco	CASA	806.74	(c)	807.62	863.98 1/9/98	686.57 21/1/98	na	na
Bourse ended little changed with most of traded volume on official market.								
Netherlands	CBS TtlRtnGen	1303.8	1322.4	1350.9	1493.00 20/7/98	974.90 8/10/98	2.1	22.8
	CBS All Shr	725.6	736.0	751.8	845.00 27/7/98	540.10 8/10/98		
Investors cautious over negative impact from last year's financial crisis in emerging markets on Dutch company results.								
New Zealand	Cap. 40	2136.61	2169.40	2160.29	2350.82 20/3/98	1698.24 2/10/98	5.11	20.9
Most leaders were sharply lower while Telecom hardened, accounting for $80m of market's $142m turnover.								
Nigeria	SE All-Share	(u)	5587.01	5697.97	6504.97 11/2/98	2236.40 12/1/98	na	na
Renewed demand from major fund manager helped prices ahead.								
Norway	Oslo SE Ind	1723.57	1752.88	1763.86	2370.66 4/5/98	1359.78 8/10/98	2.18	12.9
Profit-taking and weak oil prices after recent strong gains left shares lower.								
Pakistan	KSE-100	923.22	933.83	932.39	1746.31 2/1/98	765.73 14/7/98	na	na
Index pulled down by PTCL – down 3.4 per cent – while elsewhere prices were mixed.								
Peru	Lima Gen	1344.86	1361.94	1372.99	1993.91 4/5/98	1169.59 21/9/98	na	na
Philippines	Manila Comp	2148.46	2139.64	2140.64	2311.42 25/3/98	1082.18 11/9/98	1.25	14.9
Edged forward after central bank cut interest rates. Metro Pacific Corp and Manila Electric made good gains.								
Poland	Wig	14199.9	14709.7	14422.3	18692.70 11/3/98	10473.70 9/10/98	1.94	10.5
Profit-taking emerged after recent sharp rally but some analysts insisted there was still some upside on market.								

Country	Index	Jan 12	Jan 11	Jan 8	1998/99 High	1998/99 Low	✣ Yield	✣ P/E
Portugal	BVL 30	5076.13	5134.93	5177.46	6176.89 22/4/98	3599.08 2/10/98	1.97	28.5
	PSI 20	11695.04	11827.98	11932.75	14283.60 22/4/98	8114.51 2/10/98		
Renewed fears over instability in Brazil, where several local companies have exposure, left market lower.								
Russia	RTS	60.13	61.34	(c)	411.81 5/1/98	38.53 5/10/98	na	na
Shares slipped as confidence in market remained weak and other bourses slid.								
Singapore	SES All-S'pore	412.75	412.63	411.69	437.98 19/3/98	253.29 4/9/98	2.14	21.8
	Straits Times	1538.98	1543.88	1545.18	1698.75 19/3/98	805.04 4/9/98		
Weakness among banks pulled financials down 2.2 per cent while in broader market rises trounced falls fourfold.								
Slovakia	Sax	94.58	91.5	94.58	182.48 5/1/98	81.45 20/11/98	na	na
Strong showing by oil refiner Slovnaft was reflected in advance by broader market.								
South Africa	JSE All Share	5863.0♥	5880.3	5819.1	8358.79 20/4/98	4894.40 11/9/98		
	JSE Gold	971.7♥	958.5	962.4	1319.80 8/10/98	672.80 18/3/98		
	JSE Indl.	6762.0♥	6808.8	6695.4	9842.70 20/4/98	5248.90 11/9/98	4.62	8.8
Market turned sour late in session as investors took fright at early falls in Brazilian shares.								
South Korea	KoreaCmpEx**	631.19	640.95	626.33	640.95 11/1/99	280.00 16/6/98	0.98	28.4
Retreated as local bond yields jumped. Foreign investors and local institutions sold while retail investors bought.								
Spain	Madrid SE	895.27	903.02	914.91	947.82 17/7/98	642.29 5/10/98	1.82	24.5
Investors unnerved by developments in Brazil.								
Sri Lanka	CSE All Share	584.12	583.85	583.68	789.78 4/5/98	461.80 3/9/98	na	na
Flat in subdued trade.								
Sweden	AffarsvardnGen	3357.0	3418.5	3383.42	3855.88 20/7/98	2411.70 8/10/98	2.14	20.7
Shares ended choppy session weak after sharp losses in Brazil.								
Switzerland	SMI Index	7427.2	7464.4	7633.7	8412.00 21/7/98	5128.50 5/10/98	1.3	24
	SPI General	4849.22	4876.18	4767.01	5237.39 20/7/98	3311.28 5/10/98	na	na
Shares ended see-saw session lower on uncertainty over market's direction.								
Taiwan	WeightedPr.**	6363.89	6408.99	6421.75	9277.09 2/3/98	6152.43 5/1/99	1.58	19.2
Financials continued lower while electronics edged forward. Volume was a similar T$86bn.								
Thailand	Bangkok SET	399.81	399.20	399.43	558.92 3/2/98	207.31 4/9/98	2.51	55.1
Banks and financials outpaced as rises beat falls beat by 4 to 3. Volume was average at Bt4.5bn.								
Turkey	IMKB Nat 100	2687.78	2670.55	2721.51	4530.99 16/7/98	1882.28 8/10/98	4.19	11.2
Market unaffected by formation of Bulent Ecevit's minority government.								
Venezuela	IBC	4354.59	(c)	4655.19	7898.92 23/3/98	2894.70 10/9/98	na	na
♣Worries over Brazil outlook outweighed cheer over re-appointment of Maritza Izaguirre as finance minister.								
Zimbabwe	ZSE Industrial	(c)	6607.79	6682.86	8785.71 31/3/98	5441.85 1/9/98	na	na
Shares higher for seventh straight session but brokers cautioned that unstable local dollar was likely to burst bubble.								
WORLD	FT/S&P World($)	(u)	314.98	317.35	318.51 6/1/99	242.36 5/10/98	na	na
	MS Capital Int$	1168.8*	1180.4	1190.8	1195.50 6/1/99	886.58 12/1/98	na	na
CROSS-BORDER	DJ Stoxx 50	3468.15	3504.20	3539.24	3679.82 20/7/98	2433.07 8/10/98		
	DJ Euro Stx 50	3502.38	3546.40	3618.57	3686.36 8/1/99	2418.23 8/10/98		
	FTSE E300	1215.91	1235.14	1253.32	1327.68 20/7/98	883.55 5/10/98		
	FTSE E100	2823.00	2862.92	2909.02	3088.97 20/7/98	2048.91 8/10/98	na	na
	HSBC Drgn	(u)	239.42	239.82	273.91 26/3/98	181.71 5/10/98	na	na
	ING Brngs Emrg	118.16	120.55	121.66	123.12 7/1/99	89.84 11/9/98	na	na

Sat Jan 9 : Taiwan Weighted Price (c). §§ Montreal. ♦ Toronto. (c) Closed. (u) Unavailable. ‡ XETRA-DAX after-hours index: Jan 12: 5198.13 −70.34. † Correction. * Calculated at 15.00 GMT. ⊕ Excluding bonds. ‡ Industrial, plus Utilities, Financial and Transportation. ♣ The DJ Ind. Index theoretical day's highs and lows are the averages of the highest and lowest prices reached during the day by each stock; whereas the actual day's highs and lows represent the highest and lowest values that the index has reached during the day. (The figures in brackets are previous day's). ♥ Subject to official recalculation. ✣ Yields and P/E ratios are based on Datastream Total Market Indices. ♣ Midsession.

THE NASDAQ-AMEX MARKET GROUP 4:30 pm January 12

Stock	Div.	P/E	Vol 100s	High	Low	Last	Chng
[illegible]							

THE NASDAQ-AMEX MARKET GROUP

Stock	Div.	P/E	Vol 100s	High	Low	Last	Chng
[illegible]							

AMEX 3:15 pm January 12

Stock	Div.	P/E	Vol 100s	High	Low	Close	Chng
[illegible]							

EASDAQ

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STOCK MARKETS

Strong yen muscles its way centre stage

WORLD OVERVIEW

The currency markets stole the limelight from the stock exchanges yesterday as an apparent burst of intervention against the yen reversed the Japanese currency's rise, *writes Philip Coggan.*

The dollar briefly bounced above the Y112 level, halting a trend of weakness against the yen that set in last August.

The yen's strength was positive for world markets for a while, relieving the pressure on the Chinese and Hong Kong currencies, but recently the trend has been less well received.

A strong yen weighs on the prospects of Japanese exporters, further burdening the troubled Tokyo equity market and it was starting to weigh on US Treasury bonds, a key support for Wall Street.

While US Treasury bonds recovered yesterday, the gap between their poor performance and the record-breaking run of equities means that valuations have become further stretched.

According to the information company IBES, US equities, as measured by the performance of the Standard & Poor's 500, are 17.4 per cent overvalued.

IBES says the market has only been more overvalued on four occasions in recent years – 1987, 1991, 1997 and 1998. On all of those occasions, apart from 1991, a correction in share prices followed.

IBES also indicates that the earnings of the S&P 500 companies fell 1.6 per cent in 1998. Forecasts for 1999 earnings growth remain high, but have been revised down from 16.6 per cent to 16 per cent.

US equities lost ground in early trading but there was little evidence that this was anything more than profit-taking, a trend that also affected European bourses.

Concern about the financial position of Brazil, where the federal government is locked in a debt battle with one of the states was one factor inducing caution.

Nor have the economic worries about the developed world, so prominent in the third quarter last year, entirely gone away. There was yet more evidence of a slowdown in the German economy, as industrial output in November was revealed to be 2.3 per cent down on the previous month.

This data came on top of weak Ifo surveys of business confidence, poor purchasing managers' surveys and weak manufacturing orders.

Analysts said that German gross domestic product may have declined in the fourth quarter of 1998.

With the core European nation in difficulty, the pressure on the European Central Bank for a cut in interest rates is intensifying.

High-techs tumble on profit-taking

AMERICAS

A broad sell-off hit US shares in early trading as investors skimmed off recent gains from high-technology leaders ahead of earnings announcements, *writes John Labate in New York.*

The Nasdaq composite registered a loss of 57.31 or 2.4 per cent at 2,327.28 while the Dow Jones Industrial Average was 116.63 or 1.21 per cent lower at 9,503.26 and the broader Standard & Poor's 500 index 19.47 off at 1,244.41.

Anticipation of quarterly and year-end results from Intel and Yahoo! helped keep the semiconductor and internet sectors under pressure in early trading. Intel lost $3⅝ to reach $136⅛ and Yahoo! was off $18 13/16 at $395 11/16.

Blue-chip and large company shares also fell back on average, despite steep rises in some issues.

Lower cyclical and financial stock prices weighed on the Dow. Aluminum Company of America lost $3 to $85⅝ after Morgan Stanley Dean Witter downgraded the shares to "underperform". Citigroup was off $1 5/16 to $56 7/16 after the company announced a new redeemable stock programme.

But Walt Disney prospered in active trading, rising $2 5/16 to $37 5/16. The company, which has launched a new online alliance with InfoSeek, enjoyed a rating upgrade by Salomon Smith Barney to "buy".

Most leading internet shares were down, with Amazon.com $17⅝ lower at $167. Online brokerage shares were higher after E*Trade said it had a stake in a new online investment bank. E*Trade gained $8¼ to reach $96⅝.

Fortune Brands climbed $1 11/16 or more than 5 per cent to $32 1/16 after the company said it expected a double-digit rise in 1999 earnings. International Paper shares fell $ 3/16 to $45 11/16 after the company reported quarterly results.

Small-company shares were pulled lower, sending the Russell 2000 index down 5.31 to 427.82.

US Treasuries rallied, with the benchmark 30-year bond 1¼ higher at 100 13/32, sending the yield down to 5.218 per cent.

Banking shares also fell back, with Chase Manhattan down $2⅝ to $73⅝. Washington Mutual fell $ 5/16 to $42 11/16 after Merrill Lynch raised it to near-term buy.

TORONTO slipped in early trading as resources issues performed poorly. The TSE-300 composite index was off 53.90 or 0.8 per cent at 6,788.41.

Eleven of the index's 14 sub-indices moved lower. The gold and precious metals sector fell 3.3 per cent after a dip in the New York gold price.

Placer Dome retreated C$1.30 or 6.5 per cent to C$18.80, while Barrick Gold Corp declined C$1.20 or 3.7 per cent to C$31.20.

Brazil worries weaken Milan

EUROPE

A second day of consolidation in **MILAN** drove the Mibtel index 2.2 per cent lower, although individual stocks put in strong performances. The index's 536-point fall to 24,119 reflected concerns about the Brazilian economy and the strength of the dollar.

Support for the market, which finished 33 above its session low, came from buying of selected blue chips. Telecom Italia rose 10.4 cents or 1.3 per cent to €8, Eni, the energy group, gained 5.4 cents to close at €5.83 and Alitalia, the airline, closed 7.5 cents or 2.2 per cent higher at €3.52.

Olivetti, the telecommunications and computers group, slid on a broker's downgrade and rumours that it wanted to take over Telecom Italia. The stock shed 14.2 cents or 4.5 per cent to end at €3.03.

The FTSE Eurotop 300 index fell 19.23 or 1.56 per cent to 1,215.91. See Euro Prices page.

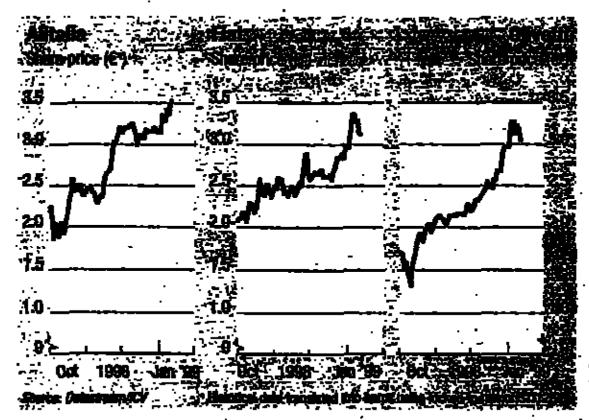
Fiat, the carmaker, continued its decline of the last few days, falling 8.9 cents or 2.8 per cent to €3.10. The stock has fallen 7.4 per cent in the last four sessions.

FRANKFURT saw a second day of consolidation, which left the Xetra Dax index 70.34 or 1.3 per cent weaker at 5,196.13.

Bank stocks were hard hit. Dresdner Bank led the retreat, losing €2.10 to €39.50 in spite of reassurance that its exposure to China's failed Gitic trust amounted to a "low double-digit million mark" figure.

However, traders said there were concerns the banks could be open to further such liabilities. Deutsche Bank gave up €1.68 to €53.92 and Commerzbank remained under pressure, losing 23 cents to €27.17 after Monday's strong sell-off.

Deutsche Telekom edged up 28 cents to €32.68, boosted by the prospect of further restructuring in the European telecom sector. Mannesmann put on €1.38 to €113.59.



Car stocks were weak on worries about slowing sector growth. VW lost €2.80 to €73.60 in spite of a 7.5 per cent increase in 1998 group vehicle deliveries. BMW lost €27 to €682 and DaimlerChrysler fell 80 cents to €91.

Industrial group Siemens edged 5 cents higher to €61.75. Traders said market sentiment about the company's ability to achieve a turnaround was recovering.

PARIS turned lower with financials under pressure on concerns over their exposure to China's failed Gitic trust. The CAC-40 index, which picked up to an early 4,213.67, finished 101.20 lower on the day at 4,100.70.

Computer services group Cap Gemini was the main drag on the index, falling €20 or 12.8 per cent to €136 after a Morgan Stanley downgrade. Other analysts agreed that the group's valuation looked high after sharp gains at the start of the year. The shares have been on a downward trend since peaking at €162.90 on January 6.

Among financials, CCF lost €6 or 7.6 per cent to €73 after Cheuvreux confirmed that it had cut its recommendation on the bank. Société Générale lost €4.20 or 2.7 per cent to €152.90 in spite of reassurance that its Gitic exposure, at $25m, was nowhere near its exposure to Russia and Indonesia.

Imetal shot up 11.6 per cent as the stock was requoted after its bid for English China Clays. The shares touched a high of €103 before closing €10.40 better at €99.80.

AMSTERDAM fell victim to nerves about the effects of emerging markets problems on Dutch company results.

The AEX index fell 9.53 or 1.7 per cent to 536.24, adding to the 2.4 per cent decline the market suffered on Monday. Investors deserted Akzo Nobel, the chemicals group that attracted interest last week. The group, 4.5 per cent down on Monday, slipped another €1.80 or 5.1 per cent to €33.20.

The return to favour of Baan, the software company, also appears to have been short-lived. The company was the biggest faller, closing €1.25 or 9.9 per cent lower at €11.35.

ZURICH was lower on profit-taking, with investors deterred by developments in China, Russia and Brazil and the impeachment trial of President Bill Clinton. The SMI index finished 37.2 weaker at 7,427.2.

Among financials, UBS eased SFr2 to SFr457. The bank said its exposure to China's failed Gitic trust was likely to be less than $30m, for which the bank had already taken provisions.

CS Group, which said it had only a small exposure to Gitic of less than SFr100m, eased SFr3 to SFr231.50.

In pharmaceuticals, Roche certificates put on SFr245 to SFr17,870 as expectations grew for 1998 sales figures due before the market opens tomorrow. Novartis edged SFr6 higher to SFr2,855.

Richemont, sharply higher on Monday following the announcement that its Rothmans International unit would be taken over by British American Tobacco, slumped SFr150 or 6 per cent to SFr2,330.

MADRID closed sharply lower, pulled down by blue chips with big Latin American exposure. The general index lost 17.75 or 2 per cent to 885.27.

Investors withdrew from banks with significant Latin America investments. Banco Bilbao Vizcaya fell 68 cents or 4.8 per cent to €13.52.

Written and edited by Michael Morgan, Michael Peel, Peter Hall and Paul Gregan

São Paulo plunges further on debt fears

SAO PAULO plunged again on worries about the 90-day debt moratorium announced last week by the state of Minas Gerais.

The Bovespa index had dived 561 or 8.6 per cent to 5,842 by midsession, making a fall of 20.3 per cent since the state announced last Thursday that it would cease debt payments to the federal government.

Preferred receipts in market leader Telebrás had fallen R$7.20 or 8.5 per cent to R$77.60.

CARACAS fell sharply as investors took their cue from their Brazilian counterparts. By midsession the IBC index had declined 319.91 or 6.9 per cent to 4,335.28.

The appointment of Maritza Izaguirre as finance minister, announced on Sunday before a market holiday on Monday, was completely overshadowed by events in Brazil.

MEXICO CITY continued to lose ground as financial markets were battered by uncertainty over Brazil. The IPC index was down 3.0 per cent or 109.60 at 3,482.60.

Weaker rand hits Jo'burg

SOUTH AFRICA

Investor concerns about Brazil and the weakness of the rand sent Johannesburg lower in the afternoon.

The all-share finished 17.3 or 0.3 per cent lower at 5,863, still 432.5 or 8 per cent higher than at the start of the year.

Banks slipped on worries that the rand's slide to a four-week low against the dollar would cause interest rate cuts to be delayed. BOE shed 41 cents or 8.6 per cent to end at R4.37.

Nikkei falters for third day

ASIA PACIFIC

The volatility of the yen caused jitters in **TOKYO** where the Nikkei average gave back early gains to finish lower for the third day running, *writes Michiyo Nakamoto.*

Profit-taking began after the Nikkei rose 150 points in the morning on positive sentiment about the dollar's rebound against the yen.

Investors also reacted nervously to evidence of friction between the ruling Liberal Democratic party and the Liberal party with which it plans to form a coalition.

The Nikkei closed 7.51 lower at 13,360.97 while the broader-based Nikkei 300 closed up 0.28 at 209.52. The Topix index of all listed shares fell 1.41 to 1,055.93.

The Nikkei moved between a high of 13,535.66 and a low of 13,212.30. Volume on the Nikkei was up slightly at 358m shares, compared with 300m on Monday. Decliners beat fallers by 716 to 390, while 169 issues remained unchanged.

The yen's mercurial performance meant some prominent exporters again came under selling pressure. Although some issues regained ground lost on Monday, Sony fell for the ninth day running, losing Y70 to Y7,390. JR East, the privatised railway company, surged Y43,000 or 7 per cent on a report that the government had decided to scrap plans to sell a second tranche of shares by the end of March.

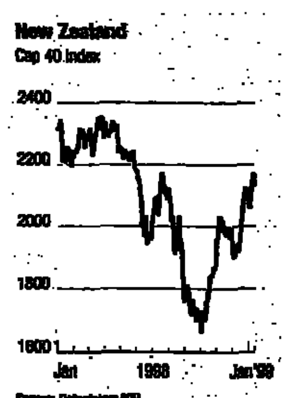
Nissan Motor gained Y5 to Y388 after reports that DaimlerChrysler co-chairman Juergen Schrempp had said his company had not ruled out taking an equity stake in the Japanese manufacturer.

SEOUL's weakness was attributed to consolidation after the market's 12 per cent rise since the start of the year and institutional investors' program selling linked with the index futures market. The composite index fell 9.76 or 1.5 per cent to 631.19 after moving between 621.67 to 651.95.

HONG KONG staged a late rally to end higher due to futures-related buying and covering of short positions. The Hang Seng index closed up 77.29 at 10,711.56 after ending the morning down 1.5 per cent at 10,477.84.

Some analysts said some foreign fund houses were moving to squeeze short sellers by placing buy orders.

The futures-related buying drove blue chips higher, led by Swire Pacific A which gained HK$1.30 or 3.5 per cent to HK$38.90. Hang Seng Bank rose HK$2.25 or 3 per cent to HK$76.25 and HSBC Holdings HK$2 to HK$206.



China-affiliated red-chip and H-share companies continued to flounder after more negative news related to the bankruptcy of Guangdong International Trust and Investment Corp. Red chips lost 2.5 per cent and H shares 4.2 per cent.

WELLINGTON saw selling pressure on most stocks as the new year rally ended. Telecom Corp, the largest capitalised company, was one of the few issues to prosper, up 2 cents to NZ$8.92. Trade in Telecom accounted for 64 per cent of market turnover of NZ$141m.

There was little joy elsewhere as the Top 40 Capital index of leading shares closed 32.8 or 1.5 per cent lower at 2,136.61. The market is still 3.5 per cent higher than at the start of the year.

SYDNEY recovered from profit-taking to end almost flat, bolstered by a rally among resources companies. The All Ordinaries index ended 3.1 down at 2,846.3, compared with 2,813.4 at the end of last year.

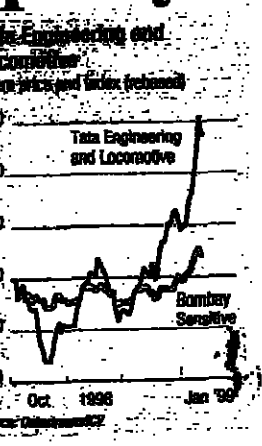
Blue-chip stocks fared poorly after leading the market up last week. Lend Lease, the property and financial services group, fell A$1.25 or 5.6 per cent to A$21.21 and Brambles, the transport and waste management company, A$1.47 or 3.5 per cent at A$40.73.

Resources stocks gained an average of 3.7 per cent. BHP rose 64 cents or 5.2 per cent to A$12.79, WMC 36 cents or 7.3 per cent to A$5.32 and Rio Tinto 52 cents or 2.7 per cent to A$19.59.

KARACHI was lower, reflecting heavy selling of Pakistan Telecom, but news that Hubco had formally accused the government and the state utility of defaulting on payments had little impact on the market. The KSE-100 index ended 10.61 lower at 923.22. PT fell 65 paise to Rs18.20 while Hubco rose 15 paise to Rs13.30.

EMERGING MARKET FOCUS

Big fall spoils Bombay party



India's stock market fell sharply yesterday, putting at least a temporary halt to a strong new year rally. The benchmark BSE 30 index plunged 78 on profit-taking and squaring-up of long positions to close at 3,353.

However, the market is still well up on the year after a remarkable first week of January when it leapt more than 10 per cent in record volumes.

The bull run continued a rally which began at the start of December when the index languished near a five-year low at 2,725. It rose almost 30 per cent in six weeks to breach 3,500 in intra-day trading this week before falling back. Even now, the index is 23 per cent higher than on December 1.

The rise has been broadly based. The first stocks to pick up were old favourites software, pharmaceutical and consumer industries, but banks and heavy industrials soon joined the party.

The late charge by big industrial stocks has been spectacular after a year of underperformance. Tata Engineering and Locomotive, the truck company, is up more than 70 per cent since the start of December when it unveiled a new car.

Information technology stocks rose strongly on fresh global interest in the sector. But the macro-economic environment remains bleak with low growth, exports down and a fiscal deficit up.

Why this enthusiasm? One answer is that India is finally joining the Asian emerging market rally. Having missed out until December, it has much ground to make up. The second is that a lot of bad news was priced into the market by late November. Then the government had just been thrashed in three regional elections, inflation was soaring and the biggest mutual fund, Unit Scheme 64, teetered on the brink of collapse.

Two months later the government is still in office, inflation is down, and Unit Scheme 64 remains afloat, awaiting a government-sponsored rescue plan. The absence of further bad news drew attention to the low valuation of stocks. By November many industrials traded at 5-6 times earnings. With India set to post positive growth of about 5 per cent, this seemed niggardly.

From early December speculators bet that low valuations would tempt back foreign investors who withdrew more than $300m from the Indian stock market last year.

The rally firmed when foreign funds bought in earnest in the first days of January but faltered when they turned net sellers on Monday. The question is whether there is a genuine inflow of new money from global portfolio-reallocation, or whether recent buying is limited to existing India funds moving back to equities from cash.

Foreign buying may support the market near current levels but is unlikely to fuel a further strong rally.

In any event, the news flow from now could be negative, with a difficult budget, gyrations in privatisation policy and the prospect of political instability. Yesterday's fall could mark the end of the new year party.

Krishna Guha

FINANCIAL TIMES SURVEY

INFORMATION TECHNOLOGY

WEDNESDAY JANUARY 13 1999

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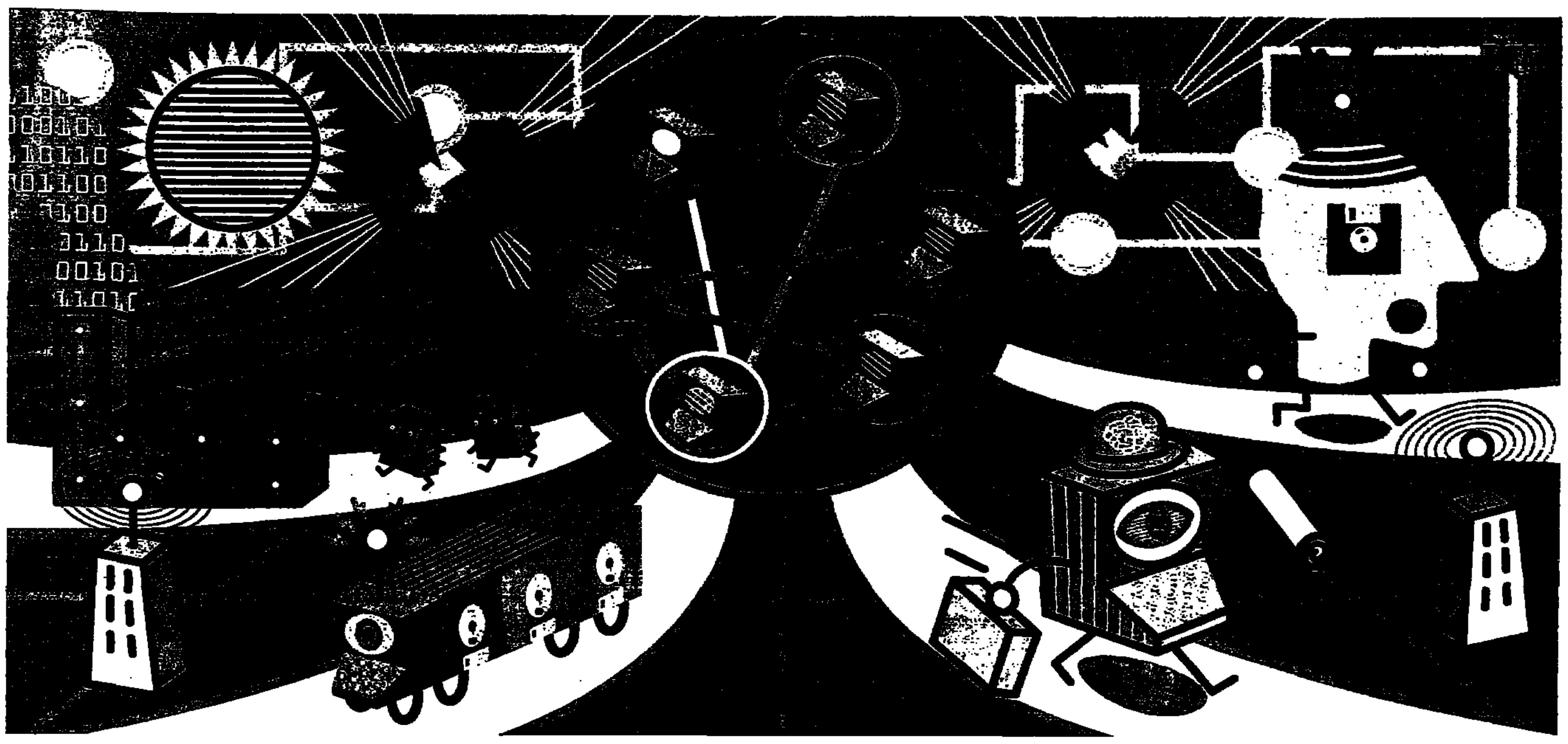

The revolutionary shape of things to come

As information technology penetrates more deeply into all aspects of business and society, our lives are set for dramatic change, predicts Paul Taylor

In the 19th century, the industrial revolution ushered in technological changes which reshaped industry, commerce and trade. Now, on the eve of the 21st century, a digital revolution – built around the ones and zeros of binary computer language – is poised to have an equally dramatic impact.

"In many ways, we are today at the place the industrial revolution was 100 years ago," says Nathan Myhrvold, chief technology officer at Microsoft, the US software giant. "It is like it was 1898. If you opened up the FT on this day in 1898, you would have thought the industrial revolution had already happened. Yet in retrospect, it had only just begun."

Indeed, it is easy to forget that it is only 50 years since the first commercial mainframe computers were developed, 20 years since the desktop personal computer first appeared and just a few years since the commercialisation of the Internet resulted in an explosion of activity on the world wide web.

Today, there are more than 400m PCs in the world, supercomputers forecast the weather and simulate nuclear blasts, and sophisticated software programs fly aircraft and run multinational companies. Spending on information technology continues to rise across all sectors even though in terms of raw power, the cost of computing has fallen by a factor of a million in the past 20 years and there is no indication that this trend is slowing.

Over the next decade, technological advances will continue, fuelled by further breakthroughs in silicon chip design and fabrication. The next generation of machines built around more powerful 64-bit microprocessors like Intel's "Merced" chip will arrive early in the new millennium and will probably have "natural" interfaces including voice and "gesture analysis" as well as keyboards and mice.

Generally, technology will become more "transparent" and less obtrusive. PC sales will continue to grow. By 2003 or 2004, Sean Maloney, responsible for global sales operations of Intel, the world's biggest chipmaker, reckons China will account for more than half the PCs manufactured worldwide.

However, there will also be many other intelligent devices including smart phones, handheld wireless communicators and interactive set-top boxes, as well as "thin client" devices used for specific purposes.

These will be grouped into heterogeneous networks at home and in the workplace, comprising a wide range of devices which are able to identify and communicate with each other over broadband links. The remaining distinctions between voice and data traffic inside enterprises and elsewhere will disappear.

The growing complexity of distributed networks will place an even greater premium on network management tools in enterprises and accelerate the re-balancing of distributed client server systems back towards centralised services. Meanwhile, the continued growth of the Internet and the web will facilitate a new form of services which will gradually begin to replace packaged software.

Software will probably become increasingly component-based and users will standardise on a framework, but then choose "best-of-breed" components from different vendors.

Perhaps most controversially, IT will begin to lead business planning rather than be determined by it. So far, computers have mostly been viewed as a tool to automate existing processes and to improve business efficiency, although – as the year 2000 computer date problem has shown dramatically – many organisations have become heavily dependent upon computers.

This growing reliance on IT systems is being driven by a wide range of factors, including market liberalisation, technology convergence and the globalisation of business activity.

Globalisation, in particular, has forced organisations to compete across geographic divides and meet the requirements of their customers, wherever they are – a challenge highlighted by the Internet's global reach.

As Craig Barrett, Intel's chief executive, noted recently, "we are already moving toward a world of 1bn connected computers. This is like a seventh continent, it provides instant access to information and presents any organisation with the ability to make informed and quick decisions.

"It alters the 'economies of scale' equation to put the kind of resources that only used to be available to large companies, at everyone's disposal, 24-hours-a-day, seven days a week. It provides businesses, both large and small, with instant access to vendors, customers, manufacturers and customer information anywhere in the world. And it is fundamentally going to change the way we do business."

Mr Myhrvold agrees. "Information technology has not really begun to reshape business yet, but I think it will do so in lots of ways." Electronic commerce, in particular, is expected to change the way people do business fundamentally.

While the short-term focus of boardroom IT discussions will probably be on issues such as ensuring year 2000 compliance and adjusting to the euro, the next decade is likely to see some dramatic changes, driven by the dawning of what has been called "the information age".

This year will probably be an abnormal one because of the year 2000 problem "and lots of people are likely to be replacing infrastructure," says Intel's Mr Maloney. However, he believes that 2000 will see a surge of e-commerce activity.

Already, the pace of change associated with the Internet and Internet-based technologies has caught many companies and boardrooms off guard. For example, who could have guessed two years ago that a bookstore started in Seattle would be worth billions of dollars even though it has yet to make a profit.

Globalisation is forcing organisations to compete across geographic divides

Amazon.com may well turn out to be a "wake-up" call for many traditional businesses. "I think the world is going to get fundamentally more competitive," says Mr Myhrvold. "You will have established companies that can suddenly be challenged by upstarts who in the analogue world couldn't match some giant company's hold on some market. But in the new world, faster technology allows them to compete enormously more effectively."

The global nature of the Internet also inevitably means more competition. "Once you have hung your store front up on the Internet, you cannot help but attract global customers; it's the very nature of the beast," says Mr Myhrvold.

While some traditional intermediaries will find their roles challenged or even eliminated in the new digital world, others will evolve to take advantage of new business opportunities. Meanwhile, the relationship between suppliers and customers is also likely to change.

Already, there is evidence of a shift in the balance of power towards consumers as traditional supply chains collapse and markets become more transparent. This has far-reaching implications for the design, pricing, marketing and distribution of a wide range of goods and services.

For manufacturers, just-in-time inventory systems, shared extranets and computer-controlled logistics operations have already made business more efficient. But most IT and business consultants believe there are more gains to be made – particularly in the field of "mass customisation".

While the "dumb machines" which arrived with the industrial revolution brought about dramatic reductions in the costs of production, mass production also meant limited flexibility, for example in colours or sizes. Bespoke tailoring was replaced by low cost off-the-shelf clothing.

Mr Myhrvold and other technologists believe that IT and the use of "smart machines" now offer the potential to transform mass production into a form of "mass customisation" that will deliver the workmanship associated with individual artisans, but with the cost efficiencies of automation.

The next decade is also likely to see a further shift towards outsourcing and the "virtualisation" of business entities around global brands – both made possible by availability of low-cost, high bandwidth communications and more sophisticated IT systems.

In a fully "wired business", or what Bill Gates, Microsoft's chairman, calls one built around a "digital nervous system", it does not matter where people sit geographically or whom they work for, as long as they have access to the right information.

As Mr Myhrvold notes, we are used to talking about free trade in terms of legal or physical barriers. But there can also be information and convenience barriers. "So many things in business are constrained silently, simply by people who might be involved not knowing or not being able to participate."

However, the explosion of information and raw data available electronically and in other forms presents challenges as well as opportunities. Several recent studies have highlighted the fact that many executives and managers feel overwhelmed by the sheer volume of data available to them and complain of "information overload" and stress.

Therefore, making this flood of data more manageable is likely to be one of the biggest challenges facing companies over the next decade. "We believe that industry is on the point of moving to a new plane" says Rick Belluzzo, Silicon Graphic's chief executive.

Mr Belluzzo's strategy for Silicon Graphics, dubbed "time to insight", is built around four tenets: traditional IT systems are maturing; problems are becoming

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ON OTHER PAGES

ELECTRONIC BUSINESS-TO-BUSINESS TRADING by Geoffrey Nairn

A vision of 'virtual commerce' communities

The Internet encourages radically different ways of thinking about business, but companies must first overcome significant technical and cultural hurdles

Online retailing is just the tip of the electronic commerce iceberg and the IT industry hopes the next few years will see the Internet revolution extend to the much larger market for inter-business trading, creating in its wake radically new ways of doing business.

The business-to-business e-commerce market is today small, but analysts believe it could start to grow rapidly as more businesses appreciate the benefits that can be obtained by ordering goods and services online. Forrester Research, the US market research company, predicts e-commerce between businesses in the US will grow from $41bn in 1999 to $327bn in 2002 – eight times larger than the business-to-consumer market.

Before such predictions can be realised, however, significant technical and cultural hurdles must be overcome. One big problem is the nature of inter-business trading which is much more complex than consumer e-commerce.

The Internet retailing model and its technologies cannot easily be adapted to the business-to-business arena. So investors hoping that e-commerce ventures in business can repeat the meteoric successes of online retailing pioneers, such as Amazon.com, are likely to be disappointed.

Another hurdle is that most business-related e-commerce projects running today are customer- or industry-specific and so the experience cannot be easily extended to other industries.

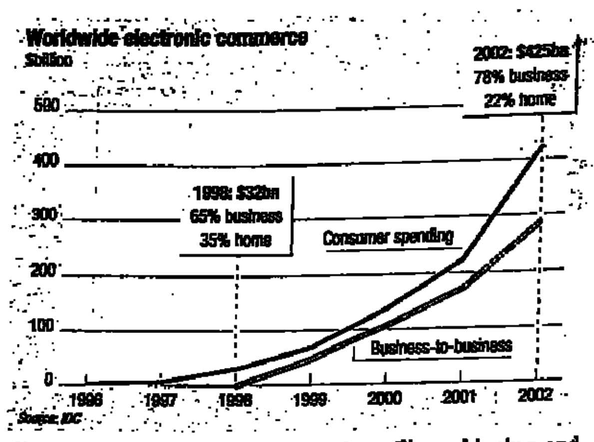
Despite the obstacles, though, there is considerable interest in bringing business trading to the Internet. One powerful driving force is the desire of large organisations to cut the time and money they spend ordering goods and services.

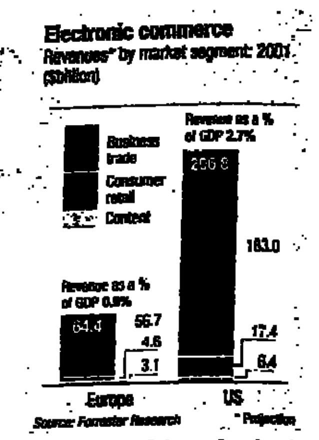
Industries may be using the latest supply chain management technologies to streamline their critical production processes, but the procurement function – particularly for non-critical items – is frequently overlooked. "Procurement is often the last area to be automated in a large corporation," says Eric Meier-Rüegg, European general manager for Commerce One of the US, which specialises in software for web-based procurement.

Lufthansa, the German airline, is about to start a trial of Commerce One's technology at its Frankfurt headquarters. If the project is successful, the system could be extended to all Lufthansa offices and embrace procurement of goods and services worth $1bn annually.

The idea behind Commerce One's technology is to allow designated employees to choose and order non-production goods – office supplies or furniture, for example – from an electronic catalogue of approved suppliers on the company's intranet. The order is then sent direct to the supplier via the Internet, bypassing a lengthy approval cycle and eliminating paperwork.

Old-style floor trading – as seen here at the stock exchange in Frankfurt – is increasingly being replaced by electroning dealing systems. See also page 5 for the impact of IT on financial services





In the US, there are almost 8m people – purchasing managers, shipping clerks, sales supervisors – employed to process the paperwork involved in inter-business transactions. Planning Solutions, a US consultancy, estimates that the cost of these "transaction" workers in the US may be more than $250bn and worldwide it could reach $1 trillion.

The Internet might seem to offer a way to eliminate many of these "non-productive" workers. But Planning Solutions claims that businesses hoping to achieve substantial payroll cuts with net-based procurement are likely to be disappointed.

The reason lies in the limitations of today's e-commerce technologies for business transactions which overwhelmingly focus on the purchase order and the people who handle them. However, these people only account for around 7 per cent of the total in transaction-related jobs.

"Even if all the purchase-order people 'went away' because of Internet automation, the savings are unlikely to be compelling enough to drive adoption," says James Luke, president of Planning Solutions. He believes that for e-commerce to become ubiquitous, it must have a radical impact on the selling, shipping and receiving functions as well as purchasing.

While Internet-based business-to-business solutions continue to focus on purchasing, their impact is likely to be as limited as that of Electronic Data Interchange (EDI) networks. Proprietary EDI systems have existed for the past two decades and have been most successful in the automotive and retailing sectors.

But EDI's penetration in the US economy as a whole is only about 2 per cent. The EDI industry is now trying to extend the appeal of the technology by adapting it to the Internet. This move to "open" EDI is gathering momentum with initiatives such as the Open Buying on the Internet (OBI) standard, developed by a consortium of 50 large purchasing companies and suppliers in the US.

Viewpoints

Critics say the weakness of Commerce One, OBI and the many other electronic business-to-business technologies is that they adopt an evolutionary rather than revolutionary view of the Internet. The aim is to adapt existing business rules and methods to cyberspace and so save costs.

Such approaches are ultimately short-sighted, believes Gajen Kandiah, director of interactive solutions at Cambridge Technology Partners, a US consultancy.

"The B2B [business- to-business] market has initially been driven by businesses who wanted to know if the Internet could save them money," he says.

"However, in the past two years, businesses are asking us how they can use technology to go beyond their existing business model."

Cambridge believes the Internet will create "new business ecosystems" that allow companies to trade in radically different ways that evolve with time.

Mr Kandiah compares the vision with that of the natural ecosystem. "No-one sets the rules for a rain forest and the ecosystem is left to evolve." These virtual commerce communities comprise many partners, suppliers and customers who share the aim of increasing customer value and creating new market opportunities.

Cambridge is helping one large US carmaker to create one of these new business ecosystems. Once started, it will be left to develop in its own way.

"The company knows it cannot control how the Internet evolves," says Mr Kandiah, who believes virtual commerce communities will be commonplace within three years.

The Internet encourages radically different ways of thinking about business. But even if technologies can be developed to support new ways of trading, significant barriers are likely to remain – and one of the biggest is cultural.

"Revolutions take time and a lot of businesses still have their heads firmly in the sand," says Mr Kandiah.

INDUSTRY LEADERS' PREDICTIONS

Pivotal role for technology managers

From previous page

more complex; there is an explosion in terms of the volume of data; and technology is becoming pervasive.

"The challenge is to process real-time info and deliver in a way that is meaningful," he says.

Capturing new types of information, such as transaction data, processing it and storing it in a data warehouse, will offer businesses new opportunities for data mining and spotting trends through the use of business intelligence software, he believes.

However, most senior IT executives also acknowledge that as they collect, sift and process data, enterprises will need to deal with growing public concerns about privacy and security. As Eric Schmidt, Novell's chief executive officer, notes, "instead of being on the Net, people will be *in* the Net."

Mr Schmidt says the principle of privacy on the Internet is being "grossly violated" and he insists people should be able to control their own identities on any network. "Our basic notion is that you as a user get to control how information is used," he says.

Just like the industrial revolution, it seems likely that the information revolution will throw up a wide range of social and ethical issues along with the business challenges and opportunities.

But perhaps, as Microsoft's Mr Myhrvold says, only one thing is really certain where technology is concerned. "One should always expect surprises. The notion that you can have a clear view of how technology is going to go for the next decade is simply wrong. There is going to be technological upheaval."

Significantly, most technologists, including Mr Myhrvold, believe that the biggest challenge will be finding the people to manage the technology.

"Managing technology will require very creative people ... there is no royal road at the moment.

"The organisations that resist change or think that technology isn't going to affect them, they are the ones that are really in trouble," he says.

"Those companies that do have charismatic managers that are able to provide leadership during this period are going to benefit enormously – in fact, in many cases they will find that technology is not just a tool, it really is the heart of their business."

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The FT Review of Information Technology

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RESEARCHER'S VIEWPOINT: GEORGE COLONY

'Dynamic trade' identified as the next big wave

The president of Forrester Research sees 'a major shift of power towards the consumer, be it a man in the street or a business . . . it is going to really sort the sheep from the goats in terms of who can run technology best', reports **Paul Taylor**

George Colony has built Forrester Research into one of America's fastest growing companies by identifying technology trends and drawing them to the attention of Forrester's global business subscriber base.

Forrester, based in Cambridge, Massachusetts, was one of the first technology consultancies to realise the implications of the commercialisation of the Internet in the mid-1990s. Now, Mr Colony, Forrester's president, believes his company has identified the next big wave.

Forrester's consultants argue that the Internet economy is moving from the early web to a new business trading model that Forrester calls "dynamic trade". They argue that this will fundamentally alter products and services, the way production schedules are determined and what pricing models are used in which industries.

"As consumers move online, there will be a requirement that companies begin to deliver in real-time," says Mr Colony. "If you look at the global 2,500 companies, we judge that only about 3 per cent today can actually do that."

Mr Colony argues that the prize for those companies that can make the transition is that they will be able to trade dynamically.

"Our definition of dynamic trade is the ability to meet current demand with customised response," he says.

"There are three aspects of dynamic trade. The first aspect is that the service component of a total product becomes more critical."

One reason for this is that it is easier to customise service than it is to customise the product. One example of this might be what Forrester calls "smart substitution".

"If you order 20,000 light bulbs from General Electric and you want them in the four pack and GE has 20,000 light bulbs, but they are in the eight-pack, the systems at GE have to be smart enough to say we can substitute the eight packs for the four packs.

"That sounds quite simple, but actually it is rather complex challenge for most systems today. What you are doing is adding special service to the product – in this case smart substitution.

Competition is likely to be brutish and short, and led by technology

"By using smart substitution, GE is able to deliver the light bulbs tomorrow rather than forcing you to wait for two weeks until the four packs are in."

He describes his second example – subscription toothpaste – as "kind of goofy". In this case, a consumer products company such as Procter & Gamble would provide its customers with a scanner to put in their waste-bins. When the customer threw away an empty toothpaste container, it would be scanned and the following day a new packet of toothpaste delivered.

Mr Colony believes there will be a movement towards the subscription to physical products, rather than actually buying them on a one-off basis. "The most important value that all of us need today is time," he says. "I may pay a 5 per cent premium for subscription toothpaste because it saves me a great deal of time. I don't go to the store to buy toothpaste anymore; it's coming to me."

The second aspect of dynamic trading is what Forrester calls "build to market". Essentially, that means that instead of Ford building 20,000 mini-vans for inventory, it would build the mini vans to order.

"Now, of course, Ford Motor Company does that today, but the lead time is approximately three months," says Mr Colony. "I was at Ford last month and they actually build a mini-van in approximately two hours, so why does it take three months to deliver? Much of it is a systems issue – the systems at Ford do not support delivery in two weeks or one week, they just won't do it.

"Of course, if Ford builds to market, it has an impact all the way down their value chain to the people who sell them tyres, to the people that sell them paint, that sell them steel, on and on and on."

While Ford's ambitions to move towards "build to market" and real time trading are constrained by its suppliers, other companies, particularly those in the personal computer industry have already made progress in this direction.

Colony: 'We are heading for a winner-takes-all market'

"The closest today are probably the PC vendors who are still selling through channels, for example IBM and Compaq," Mr Colony says. "IBM is pioneering what it calls the 'channel building strategy' where essentially, instead of IBM building PCs and sending them out to stores where they are sold, IBM sends out disk drives, motherboards and memory and they are assembled in the store to a customer specification."

While these examples focus on the retail market, Mr Colony emphasises that the heart of Internet commerce is business-to-business trade.

"When General Motors wants an engine from one of its subsidiaries, it wants the engine to be delivered exactly in time to be installed in a Chevrolet car," he says.

"Build-to-market becomes a much more important issue in the business-to-business market than in the business-to-commerce market."

Mr Colony admits that the third component of dynamic trade – "price close to market" – is probably more controversial than the first two. "List price is a phenomenon of the western world and actually is a rather new phenomenon; it is only 150 to 175 years old. So why does list price exist?

"I believe it exists for two reasons. One is because it is a time saver, second, the value chain has been so rigid that you need a list price at the end of it to ensure that you could pay for every step along the value chain. However now we have several new dynamics.

"The first is that the consumer, or what the consumer will pay, is much more transparent because of online. The second aspect is that the value chain, using systems, is becoming flexible enough to flex to an ultimate different price every day."

He argues that the best early efforts towards "price to market" are the Internet bid and auction businesses and that, on the basis of Forrester's research, online bid systems are enabling those inviting bids to extract approximately a 5 to 10 per cent cheaper price from suppliers. However, he warns that "pricing to market" holds some risks. "You have to be careful."

For example, Coca-Cola is experimenting with a smart Coke machine that would price Coke higher on a hot day and at a lower price on a cold day. "Now this is can be quite difficult," he says, "because there is a point where the consumer will say 'you are gouging me, you are taking advantage of me', and so it is a brand-threatening strategy for some consumer products."

Similarly, Little Caesars, the third largest pizza maker in the US, is thinking of pricing the pizza at noon at $10 a pizza and at $8 at 3pm. "That may be perceived by consumers as being acceptable," says Mr Colony. "It's good for Little Caesars because their traffic increases and they get better utilisation of their capital."

But he accepts there is a thin line between what consumers will accept, and what they will object to. "There is much to be learned here."

The Forrester president adds: "These are the three aspects that are driving dynamic trade and we would argue that if you are going to be a successful online company, your systems will have to be able to perform real-time and you will have to trade dynamically along these three axes."

More fundamentally, he argues: "I think we are seeing a major shift of power towards the consumer, be it a man in the street or a business. I think it is going to really sort the sheep from the goats in terms of who can run technology best. Ten or 15 per cent of companies will 'get' dynamic trade, understand it, do it first and gain a first mover advantage.

He believes it will be a "winner takes all" market. "You might have 20 players in a market and it may come down to five players who can really dynamically trade – and the other 15 players either find other work or go out of business. It is going to be very brutal, I think. Brutish and short, and led by technology."

THE FUTURE OF BANKING by Christopher Brown-Humes

Continuing upheavals in the world of finance

A technology-led transformation could bring the end of physical money, replacing it with smart cards and electronic cash cards – and perhaps bringing a single global currency in the 21st century

Is the technology revolution – and online banking, in particular – going to wipe out the traditional High Street bank?

In 10 years time, banks will be "just a window on your TV and a black box somewhere," predicts Nick Spooner, managing director of Entranet, a UK provider of online commerce services.

Others are more cautious, pointing to vast numbers of technophobes, who took long enough to get used to cash machines and will be even more fazed by the prospect of doing their banking remotely.

What all agree on is that a huge process of change is under way. And as customers become more sophisticated and more confident about the new technologies, banks will no longer be able to rely on the inertia that currently stops many of the customers deserting them for better deals elsewhere.

Who will dominate banking in this electronic and digital age? Microsoft, retail banks, such as Barclays in the UK, or big entertainment and sports names such as Manchester United, the English football team? Retailers, phone companies, digital broadcasters, software groups – all are jostling for position.

The process is part of a wider transformation that could bring the end of physical money – replaced by smart cards and electronic cash cards – and maybe even a single global currency in the 21st century. The implications in terms of regulation, fraud and privacy are significant. Inevitably, too, there are huge potential consequences for bank branches and call centres.

Internet banking is most advanced in US and European countries such as Germany, France, Spain and the Netherlands. In Britain, Royal Bank of Scotland, Nationwide Building Society, Citibank UK and the Co-operative Bank are among the leaders. RBS, which launched its internet banking service in mid-1997, has 23,000 customers.

New entrants are coming onto the scene, too. Prudential, the UK's biggest life assurer, recently launched a new direct banking service called Egg, aimed specifically at the technologically literate and Internet users. In the first two weeks alone, its Internet site recorded more than 1m hits.

Justifying its approach, the Pru cited research showing that two out of three financial services products could be delivered remotely in 15 years time.

Although the absolute number of Internet bank customers remains small, demand is expected to increase sharply with the advent of digital TV.

Forrester, the US consultancy group, predicts that 3.1m Europeans will be using the Internet for financial services by 2000. Two years after that, it expects the figure to have risen to 10m.

Over the next five years, it argues, banking activity will make up the majority of overall financial activity online. "Securities will require years of customer education to take off in markets like the UK. Powerful middlemen and complicated products will keep on-line insurance sales minimal," it believes.

Not everyone shares that assessment. Cap Gemini, for example, believes the first real area of Internet trading in finance will be investment products – particularly individual savings accounts – and execution-only stockbroking. The European computer services group maintains it will be older, wealthier customers who will mainly trade on the Internet first, and not the young as is commonly believed.

For the customer, Internet banking offers the prospect of convenience – literally being able to bank anywhere, anytime. It also gives customers more choice and makes it easier to compare offers. PC banking is slightly more restrictive because it ties customers to using their own computers.

For suppliers, online banking is less people- and infrastructure-intensive than branches or call centres and, therefore, cheaper to provide. In theory, that should mean better deals.

"If you have many service providers, all operating at very low cost because they have little physical infrastructure, and where customers can move from one to another easily, then you move towards perfect competition," says John Hardy, chief executive of Link, the automated teller machine network in the UK.

According to Mr Spooner at Entranet, it costs about the same to set up an Internet banking site as it does to maintain a branch in a provincial High Street in a single year.

This world favours the fleet-of-foot and those with a strong brand. Thus, you could have Manchester United Bank as the shopfront with, say, Barclays standing behind it providing the banking expertise and processing capability.

This extends what is already happening in retailing where Sainsbury's Bank is part of a joint venture with Bank of Scotland and Tesco's with Royal Bank of Scotland. Equally, you might have a Yahoo Bank or Microsoft Bank.

The economics of banking will certainly change, favouring large organisations less and smaller groups more. Moreover, geography will matter less, because search engines will let customers find the deal that suits them anywhere in the world.

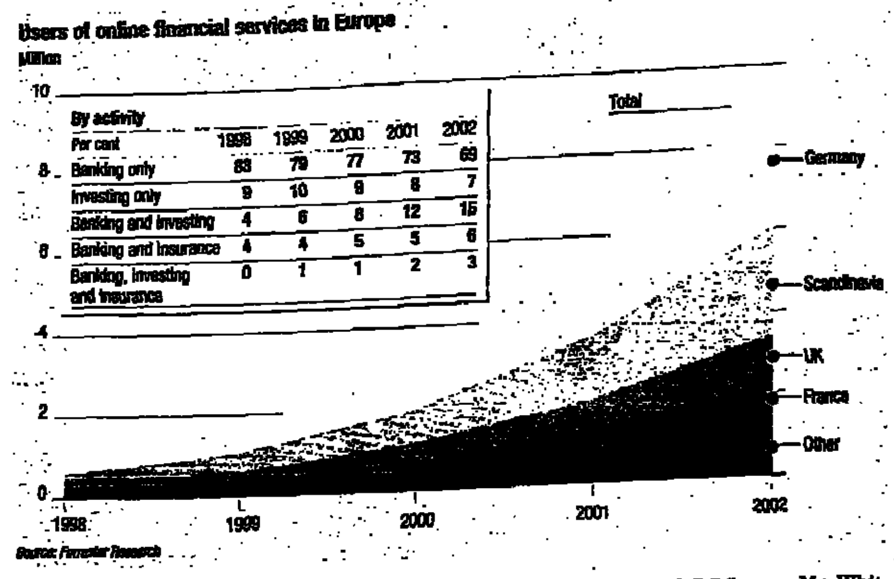
Does this mean branch numbers will shrink? Almost certainly, and their functions will change. Call centres, too, will be affected. For example, banks may need to develop an Internet support service capability to help customers having difficulty accessing their accounts.

Colin Whittle, head of electronic channels at Nationwide Building Society, says online banking will not displace bank branches, merely change their function. "They will become less transaction-based and more advice-based," he says. This reflects a widespread belief that advice is not something the Internet can deliver as successfully as face-to-face contact.

"Our long-term aspiration is to give customers a personal branch via an Internet-enabled PC," says Mr Whittle. Later this year, Nationwide customers will be able to make mortgage applications, apply for loans via the Internet and set up standing orders. But online banking is only part of a wider transformation. It will require retail outlets to be wired up and the transfer of value by direct electronic means to be acceptable everywhere.

"Quite what the new model will be, no-one knows but it will be vastly different," says Mr Hardy at Link. "International barriers will be far less important, money more fluid, customers very much more in control. Why buy an electronic service in Britain at £100 when you can get it in the US for $50 – and still have it delivered on time?"

Users of online financial services in Europe



By activity, Per cent	1998	1999	2000	2001	2002
Banking only	83	79	77	73	69
Investing only	9	10	9	8	7
Banking and investing	4	6	8	12	15
Banking and insurance	4	4	5	5	6
Banking, investing and insurance	0	1	1	2	3

Source: Forrester Research

CASE STUDY
CITIBANK

A balancing act on the technology tightrope

After using a variety of IT systems, the US bank has now decided on a policy of standardisation and outsourcing

The task of riding and harnessing technology is hard enough for any financial services organisation. Alongside rapid changes in delivery channels and doubts over which emerging standards to back, banks and other financial services providers have shouldered a heavier burden than most in adapting their systems to cope with the birth of the euro and the arrival less than twelve months on of the year 2000.

At Citibank, the banking arm of the Citigroup bancassurance conglomerate formed this year by the merger of Citicorp and Travelers Group in the US, the task is made even harder by the geographical sprawl of Citibank's worldwide retail and corporate banking operations, and by the complexity of the group's merger process.

Citibank has a long history as a technology powerhouse and still has one of the largest IT budgets in the world, estimated at $1.8bn a year. But it has also chased down its fair share of technological dead-ends, and the last few years have seen a dramatic overhaul of its approach to technology.

The bank had a reputation in the 1970s for doing everything itself – most notoriously in its insistence on developing the "magic middle" bank card, which Citi eventually had to abandon in favour of the lower performance magnetic stripe card adopted by every other bank.

At the same time, however, the bank's far-flung operations meant that often, technological diversity flourished in-house.

"We did a lot of one-off solutions. We would plant the flag and let a thousand flowers bloom," acknowledges Ed Horowitz, head of Citibank's advanced technology group.

Consolidation

But over the last two years, Citibank has taken dramatic steps to consolidate and standardise its global technology operations, including an $889m restructuring charge in 1997. A subsequent $900m charge in December dealt with merger-related costs, including those involved in consolidating call centres, back office functions and trading platforms.

At the same time, however, it has begun to outsource many of its technology functions, striking an eye-catching series of deals and partnerships with a wide range of outside technology groups and suppliers.

Until October 1997, Citibank used even to make its own automated teller machines, but it has now contracted with NCR to make and support ATMs. Last year, the bank signed a deal valued at $750m over five years to consolidate the 11 separate data networks it used into one network owned and managed by AT&T. It has also bought into Transpoint, the electronic bill presentment and payment service originally set up under the name MSFDC by Microsoft and First Data Corp.

Citi is also one of a group of eight international banks that last year set up a "global trust enterprise" to offer authentication services to businesses involved in e-commerce.

Citi has also been spreading its name over the world wide web, signing up as exclusive sponsor of Netscape Netcenter's personal finance channel, which is expected to become one of the biggest Internet portals for financial services. "We have learned to work and play better with others. We also recognise that from time to time today's partner will become tomorrow's competitor. We have to become comfortable with that," Mr Horowitz says.

From 1997, Citibank started to embrace the Internet. It has now adopted the Internet for almost all of its consumer banking and some of its corporate banking applications. A series of products is expected to be rolled out over the next year.

The bank has tried, however, to avoid betting everything on a particular technology. "We don't like to fight these technology religious wars," says Liz Kaufman, Citibank's senior technology officer.

Ms Kaufman describes her job as looking after the bank's legacy IT environment, while Mr Horowitz takes care of advanced technologies.

So many resources have been devoted over the last two years to the year 2000 – estimated to cost the bank around $600m from 1996 to 1999 – and to European monetary union, that Citi decided to split off Mr Horowitz's group under the name e-Citi. The aim was to ensure that in its determination to survive the millennium computer "bomb", the bank did not lose sight of the need to drive on with the introduction of new technologies.

. That is a process that Mr Horowitz regards as only just beginning. He points out that with just about any car today, you can climb in, turn the key and drive off, without thinking about the separate operations needed to get it going. Similarly, you simply turn on a television and watch.

"Right now, the computer environment, the Internet environment is not instant 'on'. You've got to boot up, dial in, and all these things take time for people who are used to instant-on," he says.

Internet banking has a long way to go before it reaches the level which Mr Horowitz describes as "the equivalent of 'add water and stir'."

George Graham

FOCUS ON A COMPUTERISED STOCK MARKET
NASDAQ

Digital exchange with worldwide ambitions

Cheaper trading costs through increased use of the Internet will help propel the globalisation of securities investment

On the industrial estate of a small town amidst the forests of Connecticut sits one of the most resilient computer systems in the world. The place is Trumbull, IT nerve centre of the Nasdaq stock market.

Wall Street is over two hours away. Instead of the noisy bustle of a trading floor, there is only the hum of the climate control. And yet through this data centre passes up to 40 per cent of American securities trades, worth billions of dollars a day. As such it is a symbol of a revolution in financial markets, the arrival of the electronic exchange.

Nasdaq was founded in 1971 and – after a slow start – has grown dramatically. It is now involved in talks with the doyen of European electronic exchanges, Deutsche Börse, believing the time is right for the start of expansion into Europe.

The globalisation of markets is the obvious reason for this transatlantic contact. Also important is the greater attention being paid to equities in Europe as a result of the crisis in state pension systems and low returns on traditional fixed income savings.

The two exchanges last year set up a working group to explore common business opportunities as part of a strategy of co-operation.

The venture also brings in experts from the American Stock Exchange, with which Nasdaq recently completed a merger. The aim is to create an integrated offering to dealers, combining not only the attractions of increased choice, but also those of different trading platforms – including order-driven, quote-driven and hybrid systems from a common front end – as well as the geographical advantages of being able to route trades through one market when the other is closed.

"It is about trying to connect dealers and investors around the world through a common network of computers," explains Charles Balfour, managing director of Nasdaq International.

Threat denied

Inevitably, this is perceived by many market participants as another threat to the dominance in Europe of London, though that is denied by Mr Balfour.

"London is linking with Deutsche Börse, too, and their talks continue simultaneously," he says. Indeed, during 1999, London and Frankfurt aim to work towards the establishment of a joint operation, which would include the provision of a common front-end for the two electronic trading platforms – London's Sets and Germany's Xetra.

Beyond 2000, a single trading platform with harmonised rules, fees and settlement process is planned. However, the relationship between the players is one of so-called "co-opetition" and so it is reasonable to ask why Nasdaq has not begun talks with London.

"Gavin Casey [the London Stock Exchange's chief executive] has full knowledge of the Nasdaq and Deutsche Börse discussion," says Mr Balfour. "Similar talks with London will hopefully follow, too."

Significantly, perhaps, Mr Balfour goes on to explain that the reason London is not yet in the loop is because it has been preoccupied with the implementation of Sets. Frankfurt has had an electronic platform for more than seven years.

Aside from the current talks, however, Nasdaq's involvement in the European financial community is already deep. European companies raised $6.5bn on Nasdaq in the second quarter of 1998 and made 117 initial public offerings. Nasdaq is also in the middle of a full scale charm offensive in Europe, aimed at European fund managers and private investors.

The exchange's ambitious plan is to bring the convenience of a web-based information and trading system to private investors. Online accounts have tripled in two years, accounting for 20 per cent of all Nasdaq stock.

By 2002, the exchange believes that 50 per cent of all trades will take place on the web. The fundamental driver here is the cost of an Internet trade which is a tenth of the price charged by a broker.

"This goes to the heart of what we are doing. If you do not provide low cost, fair and transparent markets for investors they will go elsewhere," Mr Balfour explains. While this trend is undoubtedly being led from America at present, it will also inevitably gather pace across Europe.

"There is a groundswell rising among younger, upper middle class consumers looking for a better way to invest and manage their assets," says Bill Doyle, director of money and technology strategies at Forrester Research.

"These consumers have enough income to make money management a serious issue, but they lack the assets to attract the attention of many full-service companies. Because they are computer-friendly, they are increasingly turning to the Internet to explore their options."

Nasdaq will be extending its links with other European exchanges in the next few months and the launch of the euro can only help its case. Whatever the fears of global economic downturns, this exchange at least remains bullish.

Mark Vernon

STRATEGIST'S VIEWPOINT: ANNE LEER

Companies are nervous in the 'global grid of chaos'

For every business using the Web to win customers, there are many others which have yet to grasp its real significance and huge potential, says Anne Leer, who is interviewed here by **Mark Vernon**

Anne Leer has a refreshingly down-to-earth view of the future which she has made it her business to try and predict.

Eschewing the starry-eyed attitude held by many futurists, she believes business is still far from grasping technology's real potential and is too prone to jumping on the latest IT bandwagon.

Take the world wide web, for example. Is it primarily a commercial tool or just a way of communicating? If the answer is the former, then the web is a controllable entity subject to established regulatory regimes, traditional market structures and familiar business strategies.

But if the web is far more loosely defined, no more inherently commercial than, say, a piece of paper, then the consequences are completely different. Ms Leer's point is that businesses assume it is the former when actually it is the latter. It is a "global grid of chaos" as one of the contributors to her new book – *Masters of the Wired World* – calls it.

"This is why Amazon.com has done so well. It has harnessed the magic of the web, leveraging communication to sell books," says Ms Leer, who is strategy planner at Britain's Oxford University Press.

Only as a by-product is Amazon.com reforming commerce. Those grappling for control of the web today are generally going about it in entirely the wrong way, she believes. So far, it has been the telecom operators that have invested most heavily in the global information infrastructure of which the Web is currently the most significant part.

But their pricing models and means of service delivery need to be radically transformed if they are not to lose out. Already, time is short, as the new "gatekeepers", as Ms Leer calls them, move in – namely, the software developers and content providers who understand far better what investments to make and how to generate returns from them.

Although there is a struggle between the two camps, the nature of the web has already determined the winner. One of the constant calls of Ms Leer – a specialist in intellectual property, media and global business issues – is for politicians and legislators to realise this.

In her new book, she attempts to make sense of "the fast-changing chaotic world" in which companies, consumers and politicians are subject to a bewildering array of new trends and technologies. The book is a compilation of articles on the information age from contributors as diverse as Arthur C. Clarke, the science fiction writer, and Charles Handy, the management guru.

Ms Leer is certainly not one of those gung-ho IT futurists who are unreservedly expansionist in their claims for the transforming power of the computer. She understands that it is people not gadgets that change and so lie at the heart of revolutions.

It is clear, for example, that the two drivers in the wired world are technology and globalisation. The technology is the digital networks which span the globe, allowing data to move effortlessly between economic and political zones. Globalisation is behind the dramatic social forces which are altering the way people live their lives.

Anne Leer: no gung-ho futurist

Yet businesses have failed to realise that what counts is neither technology nor globalisation, but consumer behaviour. There is a discrepancy between what IT can do and what people do with it. Blindness to that is commercial folly.

"The problem is that commerce gets seduced by technology, scrambles madly onto the IT wave, but then finds it tremendously hard to stay afloat," Ms Leer says. "That is why there are so few really good commercial web sites. Most have gone online simply out of fear."

This moves Ms Leer onto a further area of differentiation. The received wisdom is that digital business cannot be carried out alone. We live in an age in which the boundaries between companies are collapsing and the supply chain is becoming more integrated, enabled by such technology as intranets and electronic data interchange.

When it comes to developing new channels over the Internet, companies have heard that short times to market are critical and so have accepted that forming partnerships might be the only way to go.

But while all this is true, Ms Leer warns of the danger of losing control of vital operations through outsourcing. "Companies must understand what is mission critical, though typically in the knowledge-based situation, this is hard to do. People make mistakes about what can and cannot be automated."

Consider the trend for implementing enterprise resource planning software, championed very successfully by SAP of Germany. "ERP works very well when the processes fit. There is, for example, really only one way to make a bottle of Coke.

"But when the situation is more complicated, as it usually is, things can start to go wrong. If knowledge itself is the core of your business, then handing it to someone who does not understand it means you are dead."

The trend towards outsourcing hides what is perhaps the biggest issue for business moving into the wired world, an issue not dissimilar to the rush in the 1980s to bring in management consultants. "Business people are nervous. They are overwhelmed. They are exhausted. There is no sense of control. In this situation, expertise is easy to sell," Ms Leer says, with the implication that some will be misled.

Arthur C. Clarke provides an illuminating metaphor in Ms Leer's book. He explains how many people's approach to the Internet can be likened to a man who tries to quench his thirst by opening his mouth underneath the Niagara Falls. They need information but get drowned in the process.

Many companies have concentrated so much on gathering information in the last few years that they have had precious little time to analyse it. But the real effort should be focused on sustaining the decision-making process, even as the hierarchical frameworks within which it has been set collapse all around.

This partly explains why so many small companies have been so successful on the web – and why they are now spending so much time maintaining their entrepreneurial spirit. In this way, they are preparing for the future.

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FINANCIAL MARKETS by Andrew Fisher

Exchanges set for a global shake-out

Although changes in traditional financial markets are happening faster than most people expected, there is still plenty of resistance to be overcome. Fully online markets with no human intervention are still a few years off

The writing is on the wall for many of the world's stock exchanges and it is technology that will largely decide their fate.

The markets of the early 21st century will be dominated by powerful computer systems and driven by the needs of demanding and cost-conscious investors. The Internet is also opening up new avenues of trading opportunity.

Thus, the traditional role of exchanges will change dramatically and many smaller ones will disappear. This explains the spate of alliances, partnerships and co-operation agreements being forged between markets keen to harness the potential of information technology to their advantage.

Some exchanges, such as Nasdaq in the US and Deutsche Börse in Germany's financial capital of Frankfurt, have long put IT at the heart of their strategy. Others are catching up, while smaller ones are being pulled along in the wake of the leading players.

Big banks and institutions have invested heavily in IT systems to speed up trading and administration and they are putting pressure on exchanges to become more streamlined and efficient. With the globalisation of business, investors want the capability to trade rapidly across time zones, currencies and types of security.

In Europe, with its host of big and small securities exchanges, the euro's arrival will inevitably cause a sharp concentration. Frankfurt and London have formed an alliance, with other European bourses such as Paris joining the discussions.

Nasdaq, the electronic US exchange *(see report on facing page)*, where such IT giants as Microsoft and Intel are quoted, is also talking to Deutsche Börse, as well as to Hong Kong and other Asian exchanges.

But some of the most exciting developments involving the role of IT originate from outside the exchanges. Technology is propelling events along at a pace that must seem alarming to those steeped in the traditions of floor trading and open outcry.

"If there is a better, faster, cheaper way to do something, then someone will take advantage of it and the rest of the world will have to compete," Bill Lupien, the man behind the revolutionary OptiMark trading technology, said in a speech in Toronto.

> **'Markets are highly complicated and emotional. You can't have everything done by computer'**

"I would hope that as this world moves more and more towards global capitalism, the disciplines of that system will produce better markets and more innovation."

OptiMark, conceived on Mr Lupien's ranch in Colorado, is aimed at taking the uncertainty out of securities trading through the use of IT. Using an IBM supercomputer and unique fuzzy logic algorithms, OptiMark enables large investors to place and execute orders anonymously, without the market getting wind of their intentions.

By eliminating "market impact" – whereby knowledge of a big impending trade moves the price before its execution – the system is designed to increase market liquidity as well as enable investors to express a range of price preferences at which they would be ready to buy or sell.

Jeff Max, a senior vice-president at OptiMark, calls it "the first market structure that guarantees participants an optimised outcome of their trading interests". Nasdaq, the Pacific Stock Exchange in California and Japan's Osaka exchange all plan to link up with OptiMark, which he says has aroused strong interest among institutions.

Mr Lupien, a former Pacific Stock Exchange trader who later headed the Instinet electronic trading network (now owned by Reuters), had the idea behind OptiMark before the technology was ready. Without the supercomputer's ability to perform billions of calculations in less than 1.5 seconds to match buyers' and sellers' order profiles and preferences, the system could not function.

But it is not the technology alone that is driving markets forward into a new predominantly electronic era. Also influential are the growing volume of global securities dealings, the increased emphasis on equities to help future pensions performance as state systems founder and the desire of individuals to take more control over their own finances. "Over the last 10 years," notes Mr Max, "the quantity of funds under management has skyrocketed in the US and Europe. The kind of liquidity and trading opportunity sought can't be delivered by traditional market mechanisms."

The needs of big funds and institutions are thus paramount in determining the future of exchanges. But the voice of retail investors is also becoming louder.

"One of the big things happening is more customer focus – retail and institutional," says Pat Tsien, partner in charge of financial markets strategy at Andersen Consulting. "In the US, as well as in Europe and globally, customers will have a much greater control over their own savings."

Technologically sophisticated: the Chicago Board of Trade. The floor covers 92,000 square feet, making it the world's largest future and options trading facility AP

She believes markets will still be at the core of the new financial network. "I see financial markets decomposing into a set of 'superwinners', but relatively few in number. The rest will be redefined into a set of 'value networks'."

These "multi-party, multi-directional" networks will be highly flexible, often highly specialised, and open to a variety of business and technology interests such as brokers, institutions and IT systems integrators.

Although Ms Tsien believes that changes in financial markets are happening faster than most people expected, there is still plenty of resistance to be overcome. "There is so much history and tradition involved that things will not change overnight," says Hans Christian Iversen, a partner in the strategy division of Braxton Associates, part of Deloitte & Touche Consulting.

There are also regulatory aspects to be considered, since governments and exchanges will still have a role to play in protecting investors and setting standards for issuers of securities. Mr Iversen thinks legislation is likely to lag behind the rapid evolution of markets.

IT and investment banking experts also point out that it is one thing to integrate trading mechanisms, but quite another to put together complex settlement systems. Fully online markets with no human intervention are thus still a few years off. "Markets are highly complicated and emotional," says one London investment banker. "You can't have everything done by computer."

CASE STUDY
ELECTRONIC TRADING IN CHICAGO

Older birds can still fly

With practice, floor-based traders can make the leap to computerised systems

The shift from floor-based trading to computerised systems may be proving rough for some old-time traders. But for others, it has thrown up opportunities.

Take Tony Saliba. A long-time, Chicago-based options trader, now in his 40s, he first made money trading at the Chicago Board Options Exchange in the early 1980s when business was bustling. But when the options activity dried up in the wake of the 1987 stockmarket crash, Mr Saliba branched out – first, into training and the development of simulation models, and then into trading-related software and products. Today, Mr Saliba's business, housed in an office tower equidistant between the three big Chicago derivatives exchanges, is split between these three elements. There remains a CBOE-based options trading operation, which acts as specialist market-maker in about two dozen different issues.

But a second leg of the business is training. Mr Saliba admits that much of the business is still options-based – although clients are both domestic and overseas – but also says that a growing number of "locals" (independent traders) at the two big Chicago futures markets have also shown an interest in getting to grips with screen-based systems.

"I hate to say this, but the older the bird, the more difficult it is to teach it to fly," he comments, suggesting that there is natural age-based division between those would-be traders who have grown up with computers, and those for whom clicking with a mouse is not an instinctive reaction.

There is also an imaginative leap to be made, he adds. Many experienced traders, he finds, tend to think of floor-based behaviour and try to translate this to an electronic environment – without appreciating that the techniques required to trade in a screen-based market are different. Still, he adds, encouragingly: "Even older guys, in their 40s or so, can learn with enough practice".

Tony Saliba: 'There is also an imaginative leap to be made'

The final element is a software development arm. At present, this is focused primarily on products which would help automate the flow of orders to the traditional pits - a handheld terminal designed for options traders, and another "Deckmaster" order-routeing system, targeted at linking desks to the futures pits where IT is belatedly making inroads, and developed in conjunction with outside partners.

Mr Saliba has little doubt that markets are heading into a much more technologically sophisticated future, and that competition from electronic rivals can only intensify. CBOE, which is already heavily automated in terms of order inflow, (although execution is still done through open outcry), is probably better placed to withstand the onslaught. "The futures markets have a much greater degree of risk. If I could try to make the comparison, the futures exchanges are weak in order-routeing, weak in paper-handling and transparency is difficult."

"On the other end, in competing with CBOE, [electronic exchanges] are going to bring cost-savings of 30 per cent, or thereabouts, which is not earth-shattering – and I think CBOE can

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ONLINE INTEGRITY by Tom Foremski

Aiming for higher levels of Internet security

Mathematicians at IBM claim to have developed a security technology that makes Internet transactions immune from the strongest hacker attacks

As companies rely increasingly on the Internet for linking remote users and offices – and for conducting electronic commerce – the security of their internal networks becomes a key issue.

Companies must not only ensure that outsiders are unable to launch attacks on their networks but also protect the security of e-commerce transactions. Meanwhile, large numbers of Internet users are still reluctant to make online purchases because of the fear that credit card numbers could be intercepted by criminals.

Furthermore, IT managers are also reluctant to build Internet-based mission critical systems because of security concerns. This is the main factor that prevents larger companies taking full advantage of the Internet, according to a recent survey of 200 IT managers at Fortune 1,000 companies by International Data Corporation, the US market research company.

Therefore, with potential returns on investment of about 400 per cent in building Internet-based applications, companies are failing to make substantial cost-savings compared with their current proprietary network-based operations.

Fortunately, however, there are many software products available that use powerful encryption technologies and network intrusion detection techniques to provide good levels of security. IT system software, such as Unix and Microsoft Windows NT, already has significant levels of security technology built-in. The problem, however, is that security is a constant issue and requires vigilance and updating on a regular basis.

"A lot depends on the user and how the system is set up and administered," says David Strom, a US computer security expert "If you use default passwords and other common settings, you are asking for trouble." Users have to be aware of "security holes" that are discovered on a regular basis and install the patches provided by the vendors, he says.

It is also important to emphasise that "there is no such thing as a perfect security system", says John Vranesevich, a US security expert and founder of the web site *AntiOnline.com* which educates users about security issues. "It's impossible to put out a fully secure product. There will always be ways found to circumvent security. If you become complacent, that's a warning sign that you are not doing enough to ensure the security of your systems," he says.

Two main threats to networks are computer viruses that spread through the Internet and attacks by hackers who enjoy the challenge of breaking into web sites and internal networks. New types of computer viruses are constantly challenging established anti-virus products.

Based on a survey of 300 US corporations and US government institutions, the International Computer Security Association (ICSA) claims there were 48 per cent more computer virus-infected computers in 1998 than in the previous year.

Many viruses are distributed as attachments to e-mail documents, so the rise of the Internet is making virus attacks more likely. The ICSA notes that while many PCs have anti-virus software applications, they are often out-of-date and unable to prevent new infections. It recommends that anti-virus software updates be made every month instead of every three months.

Network Associates, the largest security software company, claims it has developed what it calls a revolutionary approach to countering computer viruses. Its AutoImmune technology will allow companies to automatically detect, remove and create a cure for unknown viruses that infiltrate corporate networks.

AutoImmune is similar to an anti-virus technology developed by IBM and licensed to Network Associates' rival, Symantec. The system uses an automated approach that constantly monitors networks and spots suspicious activities, identifying viruses and preventing their spread. "Our goal is to virtually eliminate the damage done by virus outbreaks in large corporations," says Gene Hodges, vice president of marketing at Network Associates.

Hacker attacks on company networks are also becoming more common. In early 1998, the Pentagon suffered from what it called an internationally co-ordinated series of attacks on its networks.

Hackers claimed to have accessed sensitive military documents, a claim refuted by the Pentagon, but it did lead to a big initiative aimed at developing new types of security technologies. The Pentagon plans to spend more than $1bn annually for the next few years, developing and installing security for its classified and non-classified computer sites.

The problem with hacker attacks over the Internet is that it is almost impossible to pinpoint who is responsible. The structure of the Internet consists of huge numbers of connected servers and networks. This gives the Internet an inherent ability to avoid massive failures in one part, simply by routing data through other parts of the network, but it also allows hackers to hide the origin of their attacks.

The US Department of Defense last year awarded Network Associates two large contracts to develop critical standards for intrusion-detection technology which may allow hackers to be tracked.

Protecting e-commerce transactions is a key issue and companies are very keen to assure potential customers that the Internet is a safe place to make purchases. Therefore, many computer companies are rushing to develop increasingly powerful security systems for such applications.

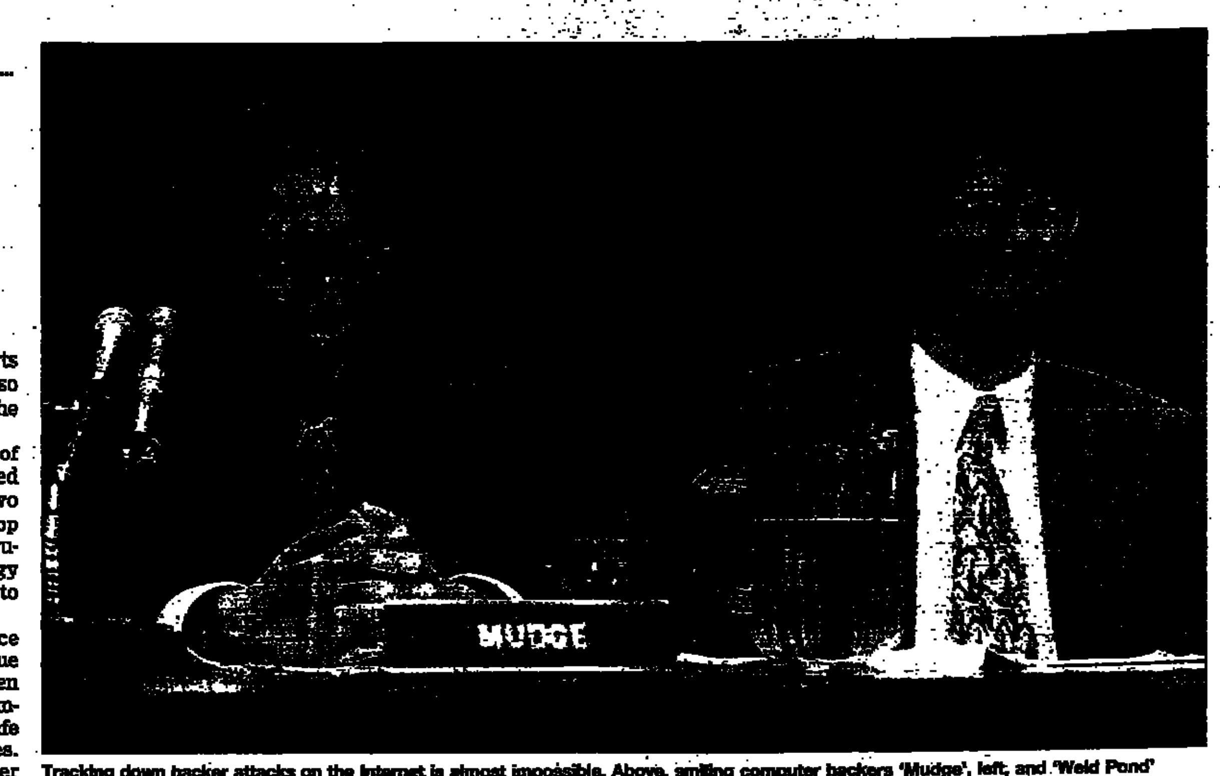
IBM, for example, claims to have developed a security technology that makes Internet transactions immune from the strongest hacker attacks. The technology was developed by mathematicians at IBM with the Swiss Federal Institute of Technology, using a variation on the public-key encryption system called the Cramer-Shoup cryptosystem.

"This system delivers a new level of integrity for Internet communications, and is particularly suited for e-commerce applications such as cyber-auctions, credit card purchases, and protecting private information," says Jeff Jaffe, general manager for IBM's security products and services.

"Businesses and consumers can have greater confidence in Internet transactions, because we've effectively closed down the only way around a cryptosystem's main line of defence."

In the US, the main issue is not the technology, but strict government controls that prevent the export of powerful encryption technologies. This causes problems for multinational companies in being able to standardise on the same products between their various offices.

Although the US government has liberalised some controls, US high technology companies continue to call for the lifting of most export controls.



Tracking down hacker attacks on the Internet is almost impossible. Above, smiling computer hackers 'Mudge', left, and 'Weld Pond' testified on Capitol Hill before the US Senate Governmental Affairs Committee on computer hacking, last year. Witnesses who did not give their real names claimed that 'computer security was so lax, that the entire Internet could be disabled in a half-hour' AP

COMPUTER RESEARCH by Mark Vernon

The spirit of Silicon Valley becomes more pervasive

By 2005, voice recognition technology may supplant keyboards for data entry and controlling machines

The brightest and best minds in computer research are finding that the world is their oyster. Every leading IT corporation is desperate to hire an innovative genius to help beat competitors or bring Nobel glory to its brand.

For those who can show they possess "must have" talents, technology companies might even build a laboratory in their country of choice. But while even relatively modest IT companies spend significant and fairly constant proportions of their budgets on research and development, the money tends to shift between "blue sky" research and commercial development, between leading edge and conceptually proven projects, and between what is fashionable and daring. The question is: what trends are likely to dominate in the next two to five years and what impact will they have on the technology used by business?

On a smart hillside close to Zurich and an hour's drive of the Alps sits one of IBM's creative powerhouses. It is packed with a crop of the IT world's elite.

The work in progress varies enormously. Some of the most interesting projects concern anti-hacking technology. Today's systems work like anti-virus software, checking that the computer is not subject to a known path of attack. But using algorithms first developed in DNA research to recognise repeated non-random patterns, unexpected changes in computer activity could be detected as the sign of an impending hack.

"This would be a great discovery because we would be able to detect unknown attacks," says Phillippe Jansen, head of information technology solutions.

Storage is another big area of concern. The IBM group working on this has developed a nanotechnology which, rather like a miniaturised record player, can read and write tiny grooves on a chip. It should be able to store a phenomenal 400 gigabytes (1,000 megabytes) per square inch.

Moreover, it turns out that physically, the technology speeds up as it becomes smaller. So performance is built in, too.

The mood at the IBM site in Switzerland is bullish. But as Karl Kummerie, the director, explains, the way researchers work has changed in recent years. Consider the case of Asynchronous Transfer Mode (ATM) switching for high-speed networks.

As pure science, ATM has an elegance to compete with any other development in information technology. But as a technology for use in production, it has struggled to find a market. It provides an illuminating example of the complex relationships existing within research projects today.

"In the past, we would have built a prototype and then handed it to the developers who would have moved it on for production," explains Mr Kummerie. "But time to market is critical now and so we work hand in hand with production from the early stages."

Typically, too, ATM is not a proprietary IBM technology. Standards, for example, are set by the ATM Forum. "We have to be involved in shaping standards and implementing them, too," says Mr Kummerie.

Even the marketing potential of a technology will be brought to bear upon development strategies. "At IBM, for historical reasons, we were very focused upon ATM alone, but that has changed. Say, for the sake of argument, that Gigabit Ethernet (a high-speed networking technology) is predominant. This is bound to impact upon investment dollars and we take corrective steps as the situation becomes clearer," continues Mr Kummerie.

Indeed, the circle is complete in other cases, where customers for the technology are included in the loop from the start.

But this does not mean that research for research's sake, necessarily suffers. A strong element of blue sky work must be maintained to attract the best scientists. And companies are always wary of missing the boat or becoming too reactive. The sudden emergence of the Internet in 1996 was a powerful wake-up call for many organisations.

There is always the danger of technology ruts, too – ways of solving problems that become entrenched by little more than fashion.

By way of comparison, the question has only recently been asked as to whether rockets are actually the best way to get into space. The received wisdom was that colossal power on the launch pad was the way to go. Colossal power on the desktop is now similarly under scrutiny.

Mr Kummerie admits that IBM is more focused on short-term research now, while noting that some of its recent successes are the results of originally more risky long-term projects.

"Copper chip technology has been discussed in our labs for at least 10 years. For much of that time we thought it could not be solved. But now it's here."

His comments are borne out by Jackie Fenn, research director for advanced technology with Gartner Group. She believes it will be technologies with immediate practical and possibly revolutionary application that are most likely to surface next.

"We are seeing a lot of the research and development 'spend' in large companies going on the user interface," she says. "Computers are still too complex and require a fundamental shift to reach a larger audience."

Thus she reckons that by 2005, voice recognition technology will supplant keyboards to input data and control machines.

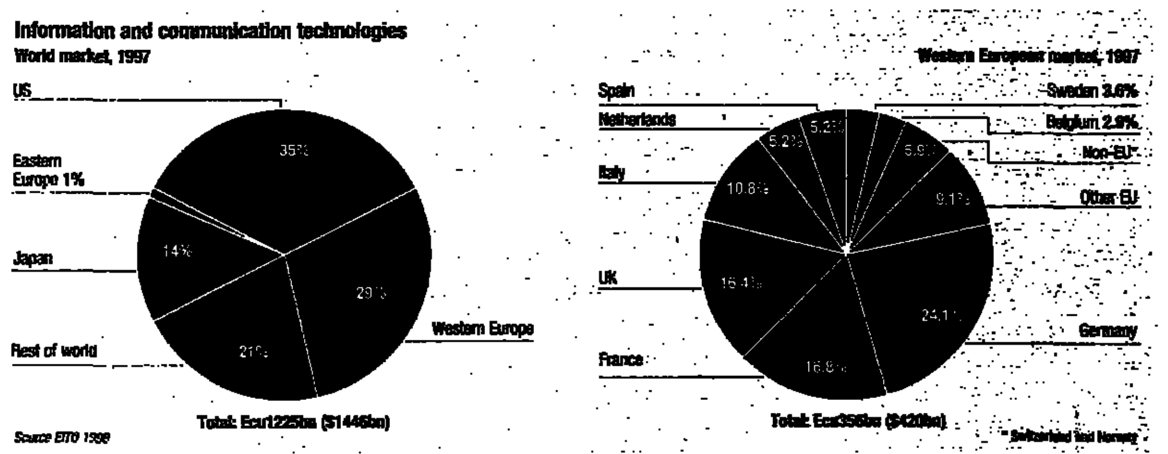
Further, fixed function devices will break up the PC monopoly. These are technology tools designed for particular uses of which the mobile phone, palmtop computer and AutoPC are just a foretaste.

"The pendulum is swinging in terms of the way research is being done, too," she notes. "Mid-sized companies in particular are centralising their research effort in order to be more proactive in their search for new opportunities."

Companies are increasingly interested in what is going on in universities – a trend of which universities are aware as they develop the means of attracting corporate sponsorship and joint ventures.

What might be called the spirit of Silicon Valley – that unique combination of commercial and intellectual entrepreneurship – is becoming more pervasive.

Computer research will undoubtedly continue to power the IT of the future. But it will inevitably become more worldly and commercial in order to stay in line with users' fast-changing needs.



More than 367,000 IT job vacancies in Europe

One job in six in Europe's information and telecommunications sectors remains unfilled, as graduates seek opportunities elsewhere, writes **Michael Wiltshire**

Europe's information and telecommunications industries now employ around two million people – an increase of 10 per cent on a year ago.

However, as equipment sales rise to record levels, Europe's young people are slow to realise the opportunities that the information and communications technology (ICT) sector offers, comments Hubert Lange, a board member of Deutsche Messe, organisers of the CeBIT, the world's largest IT show, held annually in Hanover, Germany.

One job in six in Europe's ICT sector is vacant, as qualified applicants are being sought for 367,000 job vacancies, reflecting a worldwide shortage of computer skills, says Mr Stielow.

The urgent need to ensure that computer systems are year-2000 compliant is adding to the skills shortage. To attract qualified IT staff, many larger companies in the Europe and the US are offering high salaries, flexible benefits and promises of a dynamic working environment.

Meanwhile, the European ICT market is expected to grow by 7.9 per cent this year to £287bn ($482bn), according to the latest forecast by the European Information Technology Observatory, EITO.

"In terms of IT sales, Europe is back on the path of rapid growth," comments Jörn Peter Stielow, chairman of the CeBIT trade fair committee. CeBIT'99, will take place from March 18-24, *(see details below)*.

In the past year, the European IT and telecoms market has outperformed the world market as a whole, says Mr Stielow.

Although there was a downturn in East Asian and Japanese markets last year, the ICT market in Japan is likely to recover with a 4.4 per cent increase this year.

The US market, with growth rates of 9.9 per cent in 1998 and an expected 9.6 per cent in 1999, will be only marginally ahead of western Europe, says the EITO report.

Europe's ICT market is divided almost equally between information technology and telecommunications. In the IT sector, services and software now make up the lion's share, with 56 per cent of the total IT market, while hardware accounts for a mere 30 per cent.

"Information technology is following the pattern established by the telecoms industry – it is developing into a typical services industry," says Mr Stielow.

European IT sales this year are likely to outstrip telecoms for the first time, rising by 9.5 per cent to £144bn ($242), he says.

Professional services – for example, network services, computer centre and consulting services – are expanding at the fastest rate at roughly 15 per cent a year. Software sales are expected to rise by 35 per cent this year.

By contrast, sales of hardware products are growing at a much slower rate at around 6 per cent a year in Europe. NT servers are a positive exception, with a forecast growth rate of 35 per cent for 1999.

European telecommunications equipment sales may well reach £143bn ($240bn) this year, despite a sharp fall in the prices of telecom services – down by 30 per cent, in some cases.

Country-by-country comparisons of the European IT market vary only slightly, between 8 per cent and 10 per cent, says the report, which predicts that IT sales in Britain will rise by 9.6 per cent this year to £26bn, putting the UK at the top of the European league table in terms of IT investment.

World's largest information technology show

More than 7,500 exhibitors from 63 countries will be taking part in this year's seven-day CeBIT show, located in 26 halls at the Hanover showground in March.

Among the exhibitors at the record-breaking event, 2,862 will come from outside Germany, with 304 from Britain, 434 from the US, and 524 from Taiwan.

Categories on display at CeBIT'99 will include:

□ Information technology – the largest display area, with 1,500 exhibitors.

□ Telecom systems – covering seven halls. It will be the biggest-ever telecoms display for a CeBIT event. All the large international carriers will be presented for the first time.

□ Network computing, with 400 exhibitors, including a network information centre.

□ More than 400 companies are displaying development, construction, production and planning systems.

□ Software, consulting services and online services. This will include a software centre for small and medium-sized companies, with 250 exhibitors presenting products.

□ Banking and office automation technology.

□ Research and technology transfer.

□ More than 200 companies will display automatic data collection systems.

□ An Internet Park will highlight the latest Internet and intranet systems from 100 companies.

□ For more details, contact CeBIT'99 at Deutsche Messe, Messegelände, D-30521 Hanover, telephone +49-511/89-0, fax +49-511/89-326 26; website hhtp://www.cebit.de

OPTIONS TRADERS

Where the rubber hits the road

From previous page:

eliminate a lot of those costs. In terms of electronic routeing, the transparency, the instantaneous fills, the CBOE is already there."

Even so, doesn't CBOE face a potentially formidable threat from the planned, all-electronic International Securities Exchange, which could begin offering 600 option contracts by January 2000?

"I think the ISE competitors are really the existing participants at the CBOE right now, just looking to carve up the pie a little differently," he comments.

"A lot of the people that I see being interested in ISE are hedging their bets. They want to be involved in both CBOE and ISE – and that's smart. With a little bit of good fortune, CBOE will be able to maintain a great deal of their market share."

"There's a lot of naysayers who think that what we do at the CBOE and other exchanges cannot be done electronically – and I've said that I think that's laughable.

"However, there are some components of the trading day that still would be very difficult, electronically.

"But two years from now – that's when I think ISC would be up and running and a reasonable force – a lot could change in terms of the ability to do spread transactions and handle large volumes.

"That, in my opinion, is when the rubber hits the road."

Nikki Tait


It's a 3-D world: aerospace engineer Michelle Gam displays the stereo glasses that give her a three-dimensional view of a space station mock-up, projected on the screen behind her at the holodeck, an 'immersive engineering room' at NASA's Langley Research Centre in Hampton, Virginia. With 3-D glass, headphones and a powerful computer, it allows engineers to jump in into a simulated 3-D environment, viewing objects from all sides and manipulating them in various ways AP

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DIGITAL MEDIA by Christopher Price

Opportunity knocks as new challenges mount

More television channels means greater fragmentation, enhancing choice for consumers but adding to TV broadcasters' headaches

As the end of the millennium approaches, Europe's media industry, for so long characterised by limited competition and bureaucratic regulation, has begun to embrace the digital age.

The results have yet to be revealed, but all the signs are that the market will undergo profound change in the next decade.

The television industry, in particular, is set to change radically as digital technology introduces more channels and interactivity for consumers, and brings increased competition and higher costs for broadcasters.

"The advent of digital television is the single most important innovation to the television since it was invented," says Noah Yaskin, media analyst for Jupiter Communications, the US market research group.

"In Europe, the digital television platform offers another route by which content owners, advertisers and merchants can offer consumers interactive products and services."

Jupiter forecasts the number of households that will be interactive via their television sets will rise sharply early in the next millennium in the two markets most advanced in digital television, Britain and Sweden.

In the former, the group believes the number of interactive television households will rise from 0.3 per cent in 1999, to more than 19 per cent in 2002.

Sweden is forecast to increase from 0.2 per cent to 29 per cent in the same period. Elsewhere, France is expected to be at 12 per cent and Germany at just 2 per cent in four years' time.

Yet while digital television offers great opportunities for broadcasters, it also presents threats. More channels means the fragmentation of audiences and a more competitive advertising market.

This, together with the high cost of embracing digital technology, will push broadcasters to look for additional sources of revenues.

In Britain, for example, which is a little more than two months into the digital television era, pay-per-view and subscription-based channels have formed a significant part of the new channels launched by existing broadcasters.

Bear Stearns, the US-based investment bank, forecasts that digital services will drive the growth of pay television from 27 per cent of households to 56 per cent by 2006 in the UK.

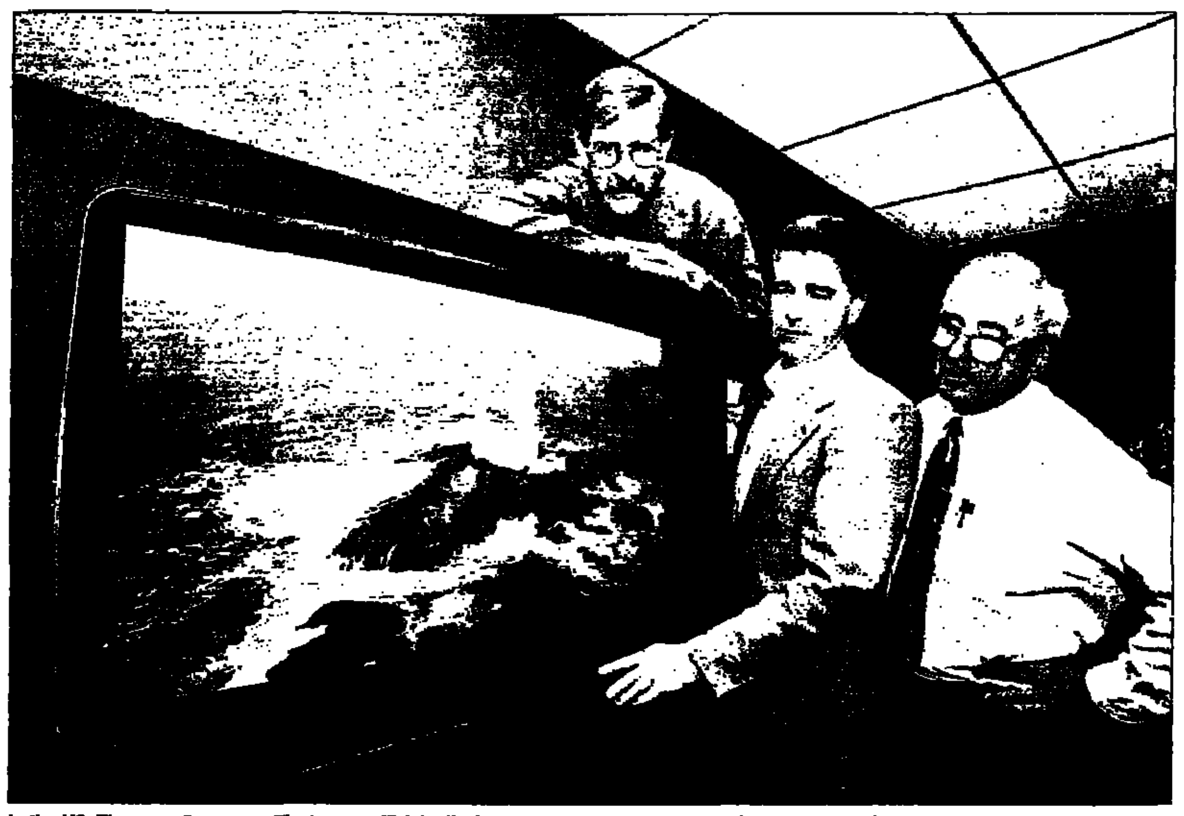
"Lower subscription prices, the TV set replacement cycle and over-the-air distribution – the ubiquitous form of TV reception in British homes – are key facilitators of this growth," the bank concludes.

Costs to the consumer are also likely to fall rapidly to aid the digital take-up. Bear Stearns predicts that interactive digital television sets will soon be no more than 10 per cent more expensive than ordinary analogue models. The gap is currently five-fold.

Meanwhile, set-top boxes, which are required to process the digital signals for analogue sets, are being subsidised by operators. Thus UK consumers are paying under £200 for models, while satellite operator BSkyB is offering free installation of its digital equipment.

While the path towards digital television penetration has some obvious comparisons with earlier technological developments, the way forward for interactivity is an untried model.

And although home banking and shopping will undoubtedly feature prominently in the next decade, the question remains: through which medium will interactivity be conducted?



In the US, Thomson Consumer Electronics officials display the company's new movie-theatre-format picture tube at Thomson's centre in Lancaster, Pennsylvania. The company's engineers developed the digital, high-definition screen that is 30 per cent wider than a traditional TV and is claimed to be the largest direct-view screen in the world AP

"Interactive television has been one of the industry's dreams for a long time," says Bill Bass, director of media and technology strategy at Forrester, the US-based IT consultancy and research group.

"The advent of digital has made convergence of the Internet and television a reality – but we believe full interactivity won't happen."

What will occur, according to Mr Bass, is "lazy interactivity", where there will be a partial integration between the television and the Internet of particular aspects of both media.

He quotes the example of television advertising as an area "primed for interactivity", where viewers could respond through their sets to a particular advertisement. Games shows are another example of an area likely to be a favourable platform for interactivity.

However, he believes that "the stuff that's good on the Internet will stay there."

Rather than pursuing integration, some of the biggest US media companies are viewing the Internet as another but significant arm to their business.

The reason for this has been the development of "portal" sites. These are Internet sites which offer themselves as gateways to the web, but also have a wide variety of services and e-commerce opportunities available.

Portal sites such as Yahoo!, Excite and Infoseek, have become global brands. This has been achieved by enticing visitors with their content of online services and encouraging them to stay as long as possible.

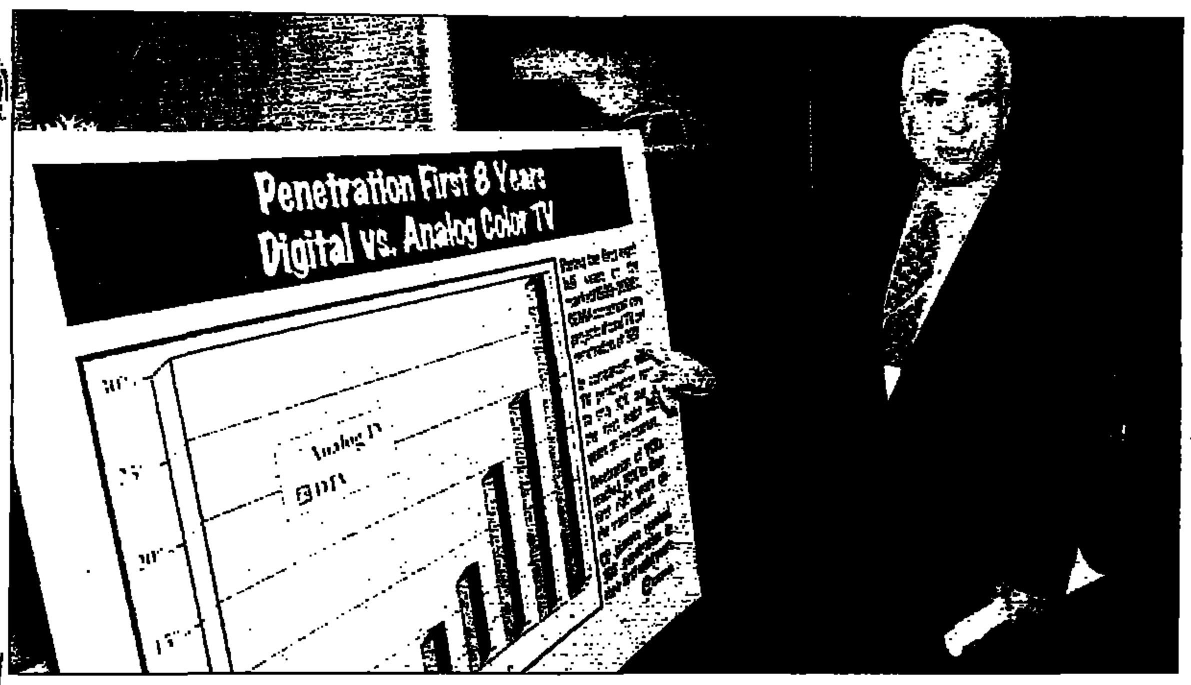
This then enables the portals to charge more to advertisers and sponsors, as well as take a bigger cut of any e-commerce transactions.

The result has seen the portals become the most sought after destinations on the Internet. Not surprisingly, the prospect of netting such large audiences has attracted much interest from the media industry.

In the most significant move, Disney last year bought a 43 per cent stake in Infoseek, one of the leading Internet portal groups.

Disney is using Infoseek's experience to fashion its own portal, Go, which it will integrate into the rest of its business operations.

"In the old media world there was little point in integrating your assets," says Mr Bass. "In the digital age, having your business work together is vital."



Senator John McCain, chairman of the US Senate Commerce Committee, asks a question about the growth of digital television as he examines one of the digital TV displays at a broadcasters' convention in Las Vegas AP

Microsoft's Bill Gates, left, watches attentively as Steve Guggenheimer, a Microsoft product manager, gives an interactive TV demonstration at a cable industry convention in Atlanta, Georgia AP

CASE STUDY
BERTELSMANN

Responding to the call of the Internet

With its decentralised structure, the German-based media group has to think hard about the best way to do business in the digital age, writes **Frederick Stüdemann**

Thomas Middelhoff, the newly installed chairman of Bertelsmann, is well aware of the central importance of information technology in the future development of the world's third biggest media company. By his own admission, Mr Middelhoff owes his promotion through the ranks at Bertelsmann to his understanding of computers, the Internet and the possibilities – and challenges – offered by electronic commerce.

Nearly four years ago, he persuaded reluctant Bertelsmann board members to take a minority stake in America Online – then just another fast-growing online service company – and set up a joint-venture with the US company in Europe.

The initial scepticism of his fellow board members was soon dispelled. As an investment, the AOL stake has given the German group a handsome return on its money as technology stocks have soared.

In strategic terms, the move opened the way for Bertelsmann to expand into new areas and upgrade its existing portfolio of printing, broadcasting and book and music publishing and club activities. By 2000, the group, which had sales of DM23bn ($13.7bn) in 1997-98, expects half of its revenues to come from its electronic businesses. These range from traditional broadcasting activities to newer multi-media businesses, such as AOL, and also include the mixing of the new with the old in areas such as book retailing.

Mr Middelhoff envisages some parts of Bertelsmann's traditional, print-based, portfolio moving over to the Internet. The chief candidate for such a shift is the group's technical and scientific publishing business, which was recently bolstered by the acquisition of Springer, a professional publisher not related to the eponymous newspaper and magazine conglomerate.

Here, Mr Middelhoff sees the electronic delivery of content to subscribers or one-off customers as a logical next step.

For fiction and general interest books, he believes that the Internet will initially serve as a retailing platform with customers going online to order books which are then delivered in physical format. However, he does not rule out direct, digitalised delivery of such books at some point in the future. Similar developments are expected in the music business.

Thomas Middelhoff, new chairman of Bertelsmann: he is grasping the media opportunities offered by IT

Bertelsmann has been slow to react to the development of Net-based book retailing which has been driven by companies such as Amazon.com of the US. But it is now seeking to catch up. Late last year, Bertelsmann bought a stake in a rival venture, Barnesandnoble.com, and is still working on the roll-out of an online book retailing service, called Books Online, for the European market.

Another area where IT is set to make a significant impact is the group's core book club division which is now being given a face-lift after years of lacklustre performance. Mr Middelhoff believes technology will play a key role in a new enhanced service in which subscribers would not just be able to buy books at discounted prices but could also be offered additional Bertelsmann services – such as subscriptions to AOL or pay-tv channels.

In broadcasting, the potential of technology in areas such as digital pay-tv has yet to be fully realised. Plans for a three-way digital broadcasting tie-up between CLT-Ufa, the European film and television group in which Bertelsmann owns a 40 per cent stake, Kirch, a big German media group, and Deutsche Telekom, the partially-privatised telecommunications giant, were blocked last year by the European Commission on competition grounds.

Relations between Bertelsmann and Kirch have also been strained in recent years, thus hampering any development at Premiere, a pay-tv channel in which both companies hold stakes. But it is not just in these, perhaps predictable, areas that technology is making an impact on the way Bertelsmann does business.

Mr Middelhoff believes that no part of the group will be untouched by technology. "The Internet will grow across our entire value chain," he says. As such, the development of a group-wide approach to the Internet, and in particular electronic commerce, is now "strategically important."

But implementing this will be difficult. Bertelsmann prides itself on a decentralised management culture arranged around 300 profit centres. Communication between the various centres is sometimes close but also often non-existent.

The effects of decentralisation – which Bertelsmann considers a cornerstone of its success by encouraging managers to act as entrepreneurs and not just corporate executives working their way up a big hierarchy – can easily be seen in IT. There are 80 different electronic data programmes and 12 different e-mail systems in operation across the group.

Mr Middelhoff believes that one of the reasons Bertelsmann has found it difficult at times to respond quickly to technology is that it has not been able to fully exploit its resources. "Amazon has one great advantage over us – they have one database." Bertelsmann's various subscription businesses, by contrast, have around 40m members but there are no links between the various units.

But he says Bertelsmann needs to be careful not to promote more decentralisation when developing a uniform strategy for the Internet. "Every part of the value chain will at some point follow its own Internet strategy – but at the moment we need co-ordination."

One impediment to the formulation of a common strategy has been the bureaucracy of such a big group as Bertelsmann. "We discuss who is responsible, while other start-ups just get out and do it."

According to Mr Middelhoff – who takes pride in the fact that the utilitarian corridors of Bertelsmann's corporate headquarters in the prim, provincial town of Gütersloh are now occasionally filled with young, shabbily-dressed technology geeks – such hindrances now lie in the past.

ELECTRONIC SHOPPING by Penelope Ody

A revolution in retailing

Today's retailers no longer talk just of 'high street' or 'edge-of-town' – they talk of 'channels to market' which can include the World Wide Web, standalone touch-screen kiosks, interactive television and mobile telephones

Long ago, in technology terms at least, larger retail companies were preoccupied with electronic payment and point-of-sale systems, while only a few brave souls experimented with "multimedia" kiosks.

That was in the early 1990s. Today, however, technology is set to revolutionise the traditional high street, leading to a major reassessment of cost structures and marketing, as well as triggering new business alliances – as in the acquisition by Britain's W H Smith of the Internet Bookshop earlier this year.

Technology is certainly having an impact on shopping patterns – although sales are still a long way from early optimistic forecasts that "as much as 20 per cent" of all shopping could "go electronic" by the turn of the century.

Forrester Research predicts that US on-line sales could reach $108bn by 2003, while Datamonitor suggests $4.97bn for western Europe by 2002 – well up on the estimated $298m for 1998 but still a long way behind the more successful US market.

Part of this clear differential is being blamed on geography. US population densities are low and consumers must often drive a long way to their nearest shops, while Europe is much more crowded and neighbourhood shopping centres are still commonplace.

Ragnar Nilsson, chief information officer at Karstadt, the German retail group, says: "Europeans live so close together that it's often more convenient to go and see the item, rather than buy it via the Internet."

Many experts believe that tomorrow's successful retailers will need to take a "multi-channel" approach to trading, allowing customers to shop in both real and virtual worlds, with a strong presence in each. That applies equally well to companies starting from an electronic base as to those with their feet firmly in the real world.

"Retailers will have to offer multiple options to purchase," says Joanne Walter, vice president for future retailing with NCR, the US-based IT systems and data warehousing group. "Being just web or just real world will ultimately be limiting – all successful traders will eventually be in both channels, otherwise they'll be missing out on some segment of the market.

"That even applies to Internet successes like Amazon.com. Book buyers like to browse in shops to touch-and-feel. If a book store is only on the web then – while customers will buy a certain percentage of their books that way – they'll still use real world locations for the rest."

Until now, electronic shopping has been dominated by the Internet which – at least in Europe – is still largely elitist, appealing to an affluent, male-dominated marketplace, and expensive (especially in countries where there is a charge for local telephone calls).

Although the web population is constantly changing, many mainstream retailers believe that – at least, in the medium term – it will be only a niche market. For them, interactive television (iTV) looks like a more successful option. Iceland, the UK food retailer, is one of the first to sign for the new interactive Open....TV channel which will be launched shortly.

"The demographic profile for TV matches our customer profile exactly," says Malcolm Walker, Iceland's chairman. "We wouldn't expect to do any business on the Internet, although the media like it, while iTV is an obvious choice."

While Internet and iTV shopping options are currently quite separate, the technologies will gradually merge, with Internet access on the television via the likes of such services as web TV. Other domestic appliances may also enter the fray; NCR has already developed a prototype microwave oven with a touch screen and in-built PC for accessing the web from the kitchen.

"Bandwidth is the key," says Irving Wladawsky-Berger, general manager of IBM's Internet division. "Television broadcasting is a very cost effective distribution mechanism but we could well see iTV and Internet coming together in a single television set using some sort of split signal technique."

Within the next five years, Mr Wladawsky-Berger expects interactive voice response systems to provide an easier interface than the conventional keyboard and mouse for accessing the Internet from the sofa. "I also think we'll see a great increase in web-enabled consumer appliances and that could encourage even more shopping opportunities."

While a web-enabled washing machine, for example, could automatically alert a service engineer when it needed fixing – much as with existing remote diagnostic systems on computer equipment – some sort of simplified web access by palm tops and smart telephones could provide an easy-to-use shopping option for consumers on the move.

Symbol Technologies already has a ball-point-pen-cum-bar-code-reader for home use and believes that microchip-sized scanners and radio transmitters could in future be added to all sorts of home appliances. This would take the proverbial "trash can with its own e-mail address" which could scan discarded packages and automatically re-order the groceries a step nearer to reality.

Currently, a major problem for would-be e-shoppers is actually finding what they want to buy among the myriad web pages. One famous e-shopping tale tells of the customer who entered "camera" into an Internet search engine to receive more than 2.5m matches and a list which included several Italian chambers (camera) of commerce.

Eventually, the convenience factor will be a key incentive for many to shop in cyberspace

Companies like Taxi Interactive, which launched an on-line "shopping assistant" in both the US and UK last October, are starting to address this problem. The Taxi application, which is downloaded free by consumers, provides a simple screen interface for accessing a pre-selected assortment of the best-known brands and retailers trading electronically.

Shoppers can then adapt this core selection to meet their personal needs and interests. The system provides a highly selective search engine which can be used to seek out best prices, deals and shopping options and then tabulates them on-screen for rapid comparison.

"In future," says Jonathan Hammond, Taxi's joint chief executive, "the system will become more intelligent so that it can make buying suggestions based on previous searches and shopping choices. At the moment, trying to find what you want to buy using a conventional search engine is like entering the void."

User-friendly interfaces will only be part of the story, however. There also has to be an added incentive for going electronic. This could be convenience, as with home delivery groceries or entertainment, which is increasingly significant in this context.

In the real world, the boundary between "leisure" and "shopping" is already blurring – and it is the same in cyberspace. "It's more important for suppliers to create a desire to use digital TV or the Internet by offering the kind of entertainment and services that will encourage a proliferation of devices," says Philip Blackwell, electronic commerce director at Cap Gemini, the European computer services company. "This will be vital for each member of the family to shop when and how they want."

Typical of this new emphasis on entertainment is Deuxième Monde – a web-based development from Canal Plus – also one of France's digital TV providers. Customers can create an "atavar" or three-dimesnional model of themselves to wander through a virtual presentation of Paris, shopping at designer stores, living in a cyber apartment (which they can decorate) and interacting with other virtual personas. Consumers have been signing-up at the rate of 1,000 a month, although actual purchases are still a long way behind the socialising and information-seeking activities.

Developments such as these may become more common in future. A study of consumer behaviour on the Internet by UK researchers Phillips Tarifica, part of Phillips Business Information of the US, identified a potentially high-spending consumer group, labelled as "I'll be there", who enjoy shopping for its social dimension and who are likely to respond to offers which incorporate the "looking, touching, feeling, trying, buying and being sociable" aspects of a visit to the store.

For these buyers, shopping may need to be a forum activity where they can discuss purchases with friends – real or virtual.

Deuxième Monde may just be the start.

British-born computer genius: Tim Berners-Lee, 43, pioneer of the World Wide Web. He is director of the World Wide Web Consortium at the Massachusetts Institute of Technology. Last year he was the recipient of the MacArthur Fellowship, carrying a stipend of $270,000 for his work on the Web AP

Shopping for software: computer enthusiasts buying Japanese language versions of Microsoft products in Tokyo's Akihabara electronics shopping district AP

MOBILE COMPUTING by Christopher Price

Packing a big punch into a small package

The big names of the IT world are battling for supremacy in the growing market for small, portable and even wearable devices to meet the needs of those on the move

The fact that portable computers will become smaller, cost less and become smarter is in little doubt. What is less clear, however, is which of the developments currently taking place will win out in what is becoming an overcrowded marketplace.

A wide range of products is contained within the portable computer market. At the lower end, in terms of cost and power, are the hand-held computers and organisers, such as those produced by Britain's Psion and 3Com of the US.

A step up in size are the mini-computers and sub-notebooks, harnessing greater power and more functionality, but losing the hand-held tag. Finally, there are the notebooks, which have become an integral part of most PC manufacturers' portfolio.

Alan Thompson, a director of Toshiba's PC division, the world's biggest portable PC supplier, says developments across the range of portable PCs are being driven by the need to "pack a bigger punch into a smaller package."

It is not, however, all about miniaturising computers. "Portable users want robust, fully functional, reliable machines which are light but not necessarily small," says Mr Thompson. "Many also want full-size screens and keyboards."

Lighter, thinner and cheaper notebooks were much in evidence at the recent Comdex computer show in Las Vegas, as well as more new entrants to the dynamic marketplace.

There were also reports that the revitalised Apple Computer group would unveil its "WebMate" notebook early in the new year. Following on from its innovative iMac PC, the WebMate will be translucent, weigh less than four pounds and offer a variety of wireless communication options.

Wireless is the development seen as crucial to the next generation of portable computers by many in the industry. Again at Comdex, Toshiba displayed a new innovation in connectivity, which enabled a personal computer to send an e-mail to a mobile phone using radio transmission.

"People want a single interface for their communications devices," says Mr Thompson. "We want to produce a portable PC which will sit and integrate with your desk PC, and which can then be used on the move but keeping you seamlessly connected to your office computer system."

Toshiba is part of the Bluetooth consortium, which is developing standards to enable wireless devices to talk to each other. Mr Thompson says manufacturers involved in the project are only two years away from producing the first such enabled devices.

One scenario is certain: users will be overwhelmed by choice in the future of mobile computing

Another significant development is likely to be the introduction, probably later this year, of the first hand-held devices to emerge from the Symbian partnership.

Symbian was formed last year by Psion, the UK hand-held computer group, and the mobile phone groups, Ericsson, Motorola and Nokia. It is using the operating system from Psion's computers as the basis for the development of a new generation of smart hand-held devices.

In particular, the potential for mobile phones equipped with such smart applications as e-mail, data transfer, enhanced memory and internet access, is seen as immense.

The formation of Symbian is also seen as a threat to Microsoft's hopes of getting its CE operating system adopted as the main standard in the emerging wireless market.

Janice Roberts, marketing director of 3Com and head of the Palm Pilot business, points out that while the Symbian developments are interesting, standards developments in the US are likely to be influential.

3Com is keen to have the operating system of the Palm Pilot, the biggest-selling hand-held computer in the world, adopted by mobile phone manufacturers as the basis of the next generation of wireless devices.

The Palm Pilot VII, which has just been launched in the US, has the capability to connect with the internet for a limited application called "web clipping". This is a service provided by some 30 news and service organisations and which the user can access. 3Com has struck a deal with Qualcom and Bell South to operate the system in parts of the US.

Other partnership agreements are expected, as are some in Europe when the model launches there shortly.

"These developments underline the Palm Pilot's move from the organiser space to becoming a business tool," says Ms Roberts. In the next few years, she expects to see the hand-held computing industry spawn a whole new range of products designed to appeal to all types of user.

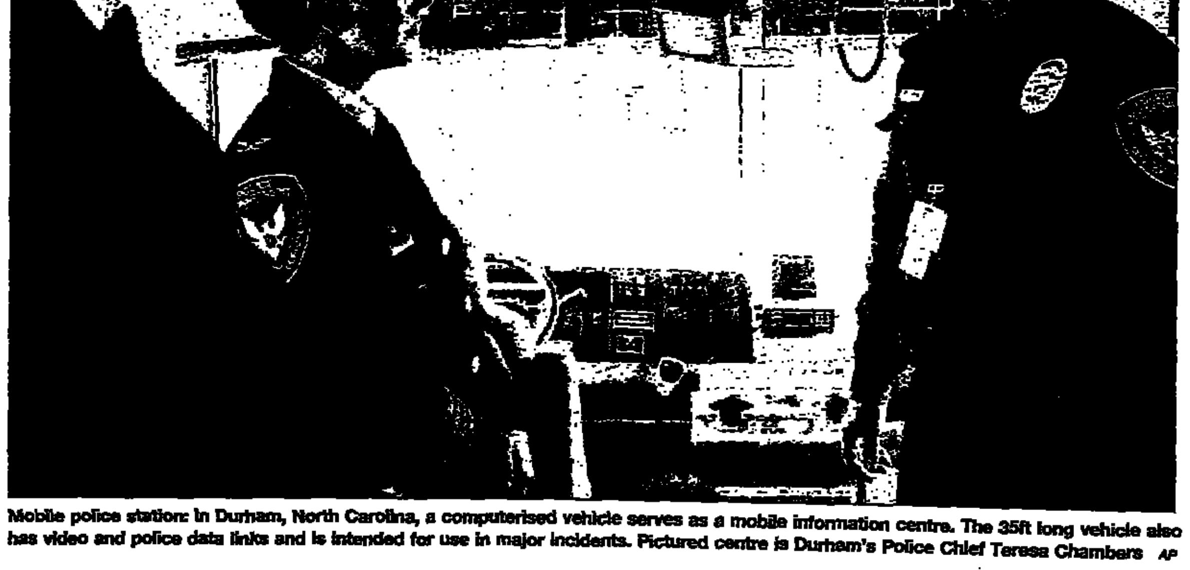
Phil Hester, chief technology officer of IBM Personal Systems Group Worldwide, says: "Every individual is going to want devices tailored to their own personal use." This is leading to the development of software agents to manage a user's various wireless devices.

IBM is hoping to introduce next year the prototype of a wearable PC into commercial trials. The 10-ounce device, which is about the same size as a personal stereo, incorporates a 233MHz processor, 340MB of storage and 64Mb of RAM.

It also has a microphone for using the voice recognition software it runs, and a screen on a boom.

Thus, with the computer clipped to a belt, and the screen set at eye-level, users can work hands-free. Mr Hester envisages the product could be suited to maintenance work, for example, or for people who prefer privacy when using a computer in public places.

Which of all these developments will succeed is impossible to predict. However, what is certain is that users will be overwhelmed by choice in the future of mobile computing.



Mobile police station: In Durham, North Carolina, a computerised vehicle serves as a mobile information centre. The 35ft long vehicle also has video and police data links and is intended for use in major incidents. Pictured centre is Durham's Police Chief Teresa Chambers AP

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BUSINESS SOFTWARE DEVELOPMENT by Louise Kehoe

New IT systems bring benefits – and traumas

While many companies are eager to keep up with the latest software trends and applications, others are wary of the potential difficulties that could be involved

In the rapidly changing world of information technology, some of the most difficult changes for users to assimilate come in the form of new software. News that a commercial software developer is about to launch a new version of the programs used on your desktop or throughout your business is a mixed blessing.

While enhanced features and new functions may make new programs more useful, the time and costs involved in upgrading software, or switching to a new program, are a big disincentive. Another problem is the challenge of making new applications work together with older systems and software.

Then there is the issue of learning to use the new program – or training staff to use it. No wonder many computer users, whether individuals or companies, think long and hard before adopting new software.

For software developers, this is a serious challenge which, until recently, has not been widely addressed. It has always been assumed that computer users would flock to buy the latest version of a program and to a high degree this "take it or leave it" approach has so far served the software industry well.

Yet as IT users begin to question more closely the costs of upgrading software and the complexity of IT systems, the industry is responding. The broad theme of reducing the complexity of computing, by making new software easier to adopt, implement and integrate with existing systems is likely to dominate the software industry over the next few years.

At Microsoft, Bill Gates, chairman and chief executive, has made simplifying desktop software his top priority. Future plans include spoken commands for frequently used functions such as "save" or "delete", gesture recognition that would enable computers to respond to the nod of a head or the wave of a hand, and – in the more immediate future – natural language processing that would allow users to ask questions or type commands in their own words.

Meanwhile, some of Microsoft's biggest competitors are proposing new models of computing that would shift the focus away from desktop software and the dominant "client-server" approach, toward networked computers. The principle behind networked computing is that users should be shielded from the complexities of information technology.

Rather than each desktop computer storing all of the software it uses, programs would reside on remote network server computers. Responsibility for IT services and software would be placed in the hands of expert technicians running the servers.

As Scott McNealy, chairman and chief executive of Sun Microsystems, explains: "People should not have to know how computers work in order to use them. You don't have to know about the Hoover Dam to take a shower, or a nuclear power plant to use electricity. Why should computers be different?"

The computer industry winners of the 21st century will be "those who understand that most users are not computer geeks ... like us," adds John McFarlane, president of Sun's Solaris software group. An outspoken critic of Microsoft and its products, Mr McNealy declares that "Windows is already obsolete".

The notion of a desktop computer loaded with sophisticated software will give way to less complex "client" computers linked to bigger and more powerful servers, he predicts. Yet Sun and Oracle, which respectively garner most of their revenues from servers and server software, may be optimistic in predicting a radical change in the way computers are used.

Seldom do computer users throw out the systems and software they have already installed in favour of a new approach. More commonly, the challenge is to bolt new systems to older "legacy" systems.

Thus, over the past year, there has been rapid growth in the emerging "application server" market, for software designed to link existing business computer systems with the latest Web applications, whether on the Internet or internal corporate networks. Application servers typically run on mid-sized computers that act as a "traffic cop" between personal computers linked to a network and the big mainframes or server computers that store a company's business records.

The application server receives requests for information from desktop computers and gathers the answers to those queries from the back-end machines, translating them into formats that can be presented on a PC.

Despite their unglamorous middleman role, application servers are a hotbed of software industry activity, with dozens of companies vying for a leading role in the emerging field.

Forrester Research, a US market research group, expects application servers to account for revenues of over $2bn by 2002, up from about $400m last year. Still, the complexity of integrating old and new software represents a big challenge for IT users.

Outsourcing

Another solution is to outsource the whole tortuous process to a third party. Outsourcing is already a well established trend among big businesses. Moving to focus on their "core competencies", many large companies have turned over management of their IT systems to experts in the field.

In the future, different forms of outsourcing may provide smaller businesses with the ability to keep on the cutting edge of IT, without having to develop in-house expertise. Oracle is spearheading this trend with its new "Business Online" services, which are scheduled to begin this month.

Rather than purchasing and managing expensive computer equipment and software, small businesses will be able to subscribe to the Business Online services, dial up the Oracle computer systems via the Internet and make use of the sophisticated software applications stored on those computers.

"It's crazy to have a [Microsoft Windows] NT Server, a 'mini-mainframe', at every doctor's office in the country," Mr Ellison says. Instead, doctors, retailers and other small businesses should outsource their IT systems, using software on a "pay per use" basis, he maintains.

However, getting rid of the headaches of complex computing also means placing critical functions such as business records and billing systems in the hands of a third party. In an era of increasing concern about the privacy and security of computer records, this might prove to be a barrier to the growth of the services that Oracle is planning.

Computer users are eager for easier-to-use computer systems and the software industry's new emphasis on simplicity is broadly welcomed. Yet the rapid growth of information technology spending over the past few years seems likely to backfire on computer and software companies in the new millennium as users settle for "good enough" systems and software, rather than struggling to keep pace with the very latest IT products.

A very different world: in the City of London, long before the computer age, Bank of England messengers dash from bank on hearing of a fall in the bank rate. Today's complex IT systems may be faster, but they bring frequent headaches for users *Hulton Getty picture*

PHARMACEUTICALS AND BIOTECHNOLOGY by Nuala Moran

A crucial role for IT in drug research

An explosion of clinical research data brings with it the need for knowledge management, a need which is being met by specialist software companies

As the next century approaches, the pharmaceutical and biotechnology industry is dependent on one to more than any other to speed the process of drug discovery and development – information technology.

This may seem odd, given the wealth of new research technologies that have arrived in the past decade, ranging from combinatorial chemistry to high throughput screening, proteomics (the study of protein structures) and genomics.

In the 1990s, the industry has invested heavily in these technologies, each of which generates masses of data. But to extract the true value from this, it must be integrated, managed and organised.

This requirement has prompted the development of a specialised form of knowledge management known as bioinformatics. While sectors such as financial services and retail are familiar with the problem of information overload, pharmaceutical and biotechnology companies face the challenge of integrating public domain and proprietary data such as gene sequences, chemical libraries, protein structures and clinical data.

Extracting value involves more than just looking for patterns, as in data mining: it means being able to link and synthesise disparate data sets and understand the significance of the combinations.

"The amount of data in the pharmaceutical industry is just exploding," says Mike Haydock, a pharmaceutical industry consultant at IBM. "This is producing some pretty unwieldy databases which are hard to search through efficiently. The difficulty is compounded by the fact that you are not just dealing with your own databases; many are publicly owned."

What the industry needs from bioinformatics is a framework for integrating and storing information, and tools such as pattern matching and data visualisation to put meaning into the data. This requirement is spurring in-house development efforts.

Thomas Bumol, executive director for research technology (biology) at Eli Lilly, the US pharmaceutical group, is responsible for for helping the research laboratories take advantage of the explosion of data associated with the Human Genome Programme and the sequencing of the genomes of other organisms.

The Human Genome project *(see also report, below)* is a publicly-funded effort to determine the sequence of the 3bn chemical units, or bases, that make up the human genetic code. "We are making a serious commitment to harnessing sequence data for two primary purposes – to find novel targets for drug discovery and to find novel therapeutic proteins candidates," says Mr Bumol.

The company is bringing together proprietary and public databases to create its own internal databases and providing desktop tools, based on technologies, including artificial intelligence and neural networks, to mine the databases.

Sheldon Ort, Eli Lilly's information officer for IT, discovery and research, says that over the past three years, its investment in bioinformatics has grown exponentially. "This is not just in terms of hardware and software but also on the people side."

The emergence of bioinformatics as a discipline is also prompting the start-up of specialist software and services companies. One of the leading bioinformatics services companies is the genomics specialist Incyte Pharmaceuticals, in Palo Alto, California, which provides databases and genomic data management software enabling the pharmaceutical industry to identify new targets and pathways for drug discovery and development.

Other companies such as Perkin Elmer and Oxford Molecular specialise in providing software that makes it possible to link up different types of data from public and private sources. In Europe, one of the leading bioinformatics services providers is Lion Bioscience, based in Heidelberg, Germany. Its main product is bioScout, an integrated bioinformatics platform which includes functions such as gene sequence annotation, gene function prediction and three-dimensional homology structure modelling.

Last year saw the launch of two such companies in the UK: Synomics, based in Cambridge, and Inpharmatica in London. Synomics, which styles itself "a pharmaceutical research informatics company", says it will provide an integrated and flexible research information management system that operates throughout the research enterprise and manages data flow across the entire drug discovery process.

At its launch, Steve Gardner, the chief executive, said competitive pressures within the pharmaceutical industry had led to major changes in the way drug research was done. "New drug discovery techniques are generating much more research data, which makes effective use of information more important than ever before."

Inpharmatica aims to identify novel drug targets by integrating computer modelling techniques with genomic data. It will apply modelling techniques to gene sequences, to recognise and predict the three-dimensional structures of the proteins for which they code, then through analysis and classifications based on protein family relationships determine their probable functions.

'A lot of drug companies are sitting on valuable data which they are not able to handle effectively'

Ken Powell the chief executive, said this was "not a sudden new organisation". It was based on 20 years of research on predicting protein structure and function from sequence data. "The new ingredient is the vast volume of genomic data which is now available in both public and private databases, and the fact that very few pharmaceutical or biotechnology companies have access to specialist bioinformatics skills needed to make sense and extract value from this data.

"A lot of companies are sitting on valuable data which they are not able to handle effectively. We will make the data manageable and apply it to drug discovery," Mr Powell adds. He argues that selection of the best target has become the critical competitive issue in drug lead discovery.

"Inpharmatica can ease the serious bottleneck which has emerged in converting raw sequence data into high quality information ... our technology detects extremely distant sequence relationships that are unavailable to our competitors."

Phil Meadows, a management consultant with Computer Sciences Corporation, says that at the same time as trying to digest all the research data generated by genomics and other research tools information, the pharmaceutical and biotechnology industry needs to change the way in which it innovates.

Instead of the R&D department churning out drug compounds, there must be a pull from the market. "There is a need to integrate processes across the organisation. New products should arise as a result of combining commercial insight with clinical data and research tools such as genomics."

In future, he says companies will need web-enabled knowledge management structures and processes. "This will enable them to select leads and design clinical protocols from a flood of potential new molecules, target populations and strategic alliances."

Mr Ort agrees. "The new genetic technologies are not just generating pre-clinical data sets, they are also leading to a revolution in clinical research and fuelling the feedback loop to discovery." In the next 10 years, pharmacogenomics – showing how the different genetic make-up of individuals influences the efficacy of drugs – will lead to customised and safer treatments.

Genonomics, a powerful new weapon to fight disease

Perhaps the most significant new research tool is genomics – the ability to link gene sequence to gene function and use this information to treat or prevent disease. To give an idea of the volume of data being generated in this field, scientists announced recently that they had completed the sequencing of the 100m bases (chemical units) that make up the genetic code of Caenorhabditis elegans.

The sequence of this one-millimetre long worm is of interest because many of the estimated 20,000 genes it codes for also occur in humans. Finding common genes, or homologies, between humans and other organisms is important because it is much easier to elucidate what a gene codes for in a worm (consisting of fewer than 1,000 cells), than in humans.

The current difficulty of this approach, and one of the hurdles that bioinformatics needs to overcome, is that many of the databases which contain sequence data do not inter-operate. This means that a researcher working on a gene in one organism might not be able to find the same gene in the database for another organism.

100,000 genes

The volume of data in the C.elegans sequence is lightweight next to the human genome, which consists of 3bn bases coding for around 100,000 genes. The exact order of these 3bn bases is being determined in the Human Genome Project, an international effort to sequence and publish the entire genetic code of humans by 2002.

In December, scientists on the project acknowledged that it was not sufficient just to churn out sequence data. Thus, they announced plans to invest in the development of bioinformatics tools for analysing the data and in the training of bioinformatics experts.

Nuala Moran

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TELECOMMUNICATION SERVICES by Alan Cane

Internet represents both a threat and an opportunity

Telecommunications operators and equipment manufacturers will *have to maintain a portfolio of products and services to compete* in tomorrow's data-centric telecoms environment

The unprecedented spate of mergers and acquisitions which has characterised the telecommunications industry over the past two years has its roots principally in two phenomena. The first is the liberalisation of the majority of the world's telecoms markets which has brought competition to most of them for the first time in more than 100 years.

Secondly, the explosive growth of the Internet has drastically increased the volume of data travelling across the global telecoms network *and forced operators to* reconsider their basic transmission strategies.

Together, they are forcing a third phenomenon: convergence or the pulling down of the technical and commercial barriers which hold telecoms and computing apart.

Some would include the creation of content – both information and entertainment – within the definition of convergence, although most telecoms operators insist they are interested only in the transmission of information rather than setting up in competition with Hollywood.

The concept of convergence is not new. Ever since it became clear that every kind of information, when converted into binary digits – the language of computers – could be transmitted and processed in the same way, the expectation has been that the two sectors would meld together. Cultural and technical differences have for most of this century prevented any such marriage .

Today, the advent of low cost personal computers, which converted the Internet overnight into a service for *the mass market, has served* to bring convergence closer than ever before.

It will not, however, bring benefits for either manufacturers or operators automatically. David Edmonds, director general of the UK Office of Telecommunications, introduced a degree of scepticism when he told a conference last year: "I am for convergence, but not for its own sake. Convergence has the possibility of delivering new, cost effective telecoms services, as well as existing services, cheaper and better. To the extent that it fulfils that promise, I am for it."

The manufacturing and operating sides of the business, have no option but to address the question. Telecoms manufacturers, for example, are finding that revenues from traditional switching systems are in decline as operators look for equipment more suited to handling increasing volumes of data. Ericsson, the Swedish manufacturer, for example, saw its shares fall by a fifth last month after reporting that sales of wireline switching equipment were weakening.

A response for traditional telecoms manufacturers has been to seek skills and experience in data communications, chiefly through acquisition. Nortel, the large Canadian manufacturer, for example, bought Bay Networks, a Californian data comms manufacturer for around $8bn in the middle of the year.

Alcatel, the French group, acquired DSC Communications, a US digital switching company, for $4.1bn. Lucent Technologies, the world's largest telecoms manufacturer, paid $117m for Lannet, an Israeli supplier of networking equipment.

The hard fact is that long distance networks built to carry data can deliver calls at up to 70 per cent less cost than conventional networks.

There are two reasons. Data switches of the kind made by Cisco or 3Com cost less and have better performance than conventional central office switches. Also, the capacity of fibre optic networks has increased a thousandfold in the past decade.

Telegeography, the authoritative US publication, cites research which shows that succeeding generations of switching technology cut the price/performance doubling time by about half. In other *words, conventional switch* technology doubles its performance for the same price every 80 months.

Switches using ATM (asynchronous transfer mode) technology take only 40 months while packet switches and routers expressly designed to handle data, take only 20 months to double their performance.

Telecoms operators are forming unorthodox alliances to stay ahead of the "datawave". In the most spectacular, old foes AT&T and British Telecommunications agreed last year to work together to create a global data network based on Internet technology.

Cable and Wireless of the UK moved quickly to secure the Internet assets of MCI when regulators demanded their disposal as the price for agreeing the MCI/WorldCom merger. The deal, costing C&W about £1bn, catapulted it into the front rank of internet backbone suppliers.

The Internet represents both a threat and an opportunity to conventional operators. Their rigid structures and comparative unfamiliarity with the technology means that other, more agile players could steal the market from them.

Voice-over-the-Internet, a way *of sending voice calls at* low cost using data technology, will certainly cause a decline in revenues in the next few years.

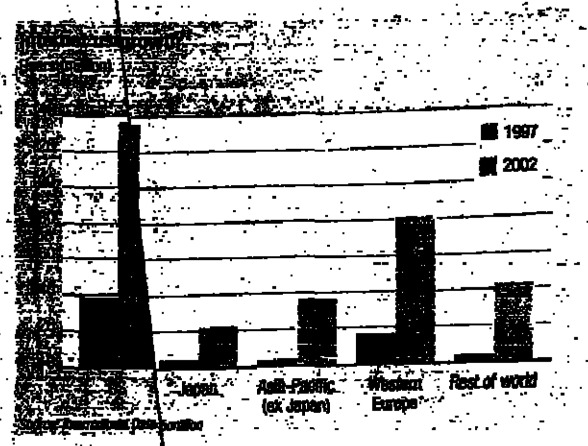
On the other hand, as conventional voice telephony moves to commodity pricing, they will be dependent on the Internet and other data systems for [illegible], higher value added services to maintain revenue.

A number of operators including AT&T Deutsche Telekom and Sonera of Finland are already experimenting with voice over the Internet. According to Margaret Hopkins of the UK consultancy Analysys: "Although the market is relatively small, it is growing rapidly. The growth is being driven by opportunities for price arbitrage and is very specific *to particular routes.* It is particularly successful on routes to countries which have not yet opened their markets to competition.

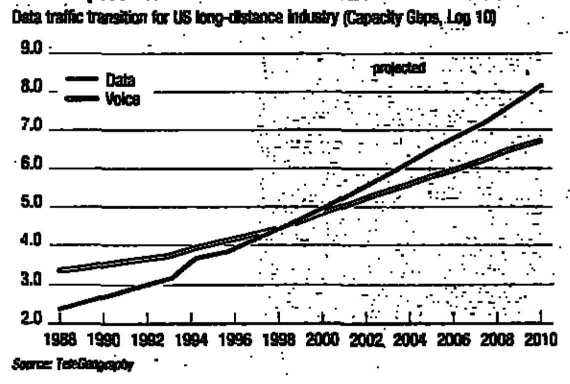
"On routes where there is strong competition and plenty of capacity, Internet telephony cannot compete."

The principal inference from all of these developments is that operators and manufacturers alike will have to maintain a portfolio of products and services to compete in tomorrow's data-centric telecoms environment. It will not be enough to dominate a particular niche. Success will depend on a comprehensive understanding of market developments and the will and agility to colonise new and unfamiliar areas.

☐ *As the charts (below) indicate, global teledensity (the number of phone lines per 100 people) varies greatly and is directly related to income. With 6bn people on the globe, there are still only 700m telephone lines, but this figure will rise to nearly 2.3bn by 2002.*

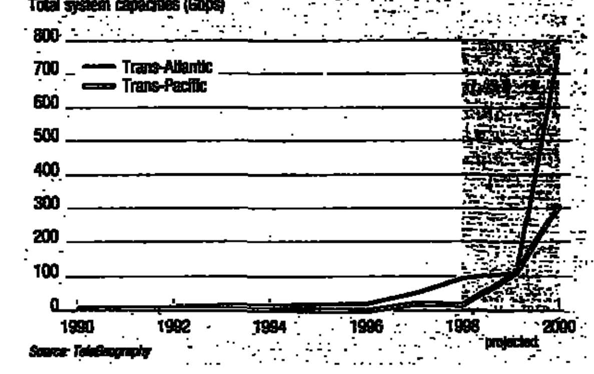


Data eclipses voice – will revenue follow?
Data traffic transition for US long-distance industry (Capacity Gbps, Log 10)



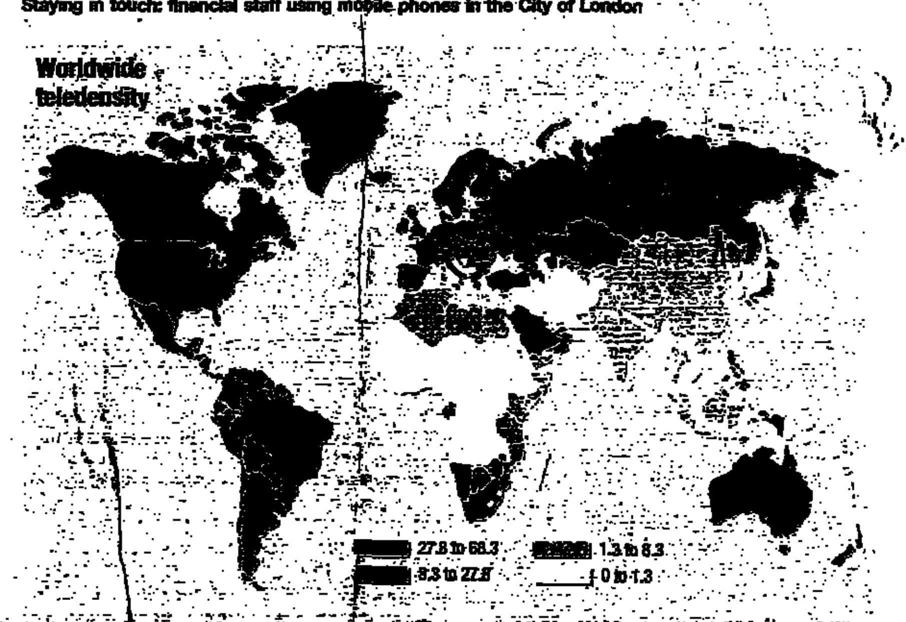
Source: TeleGeography

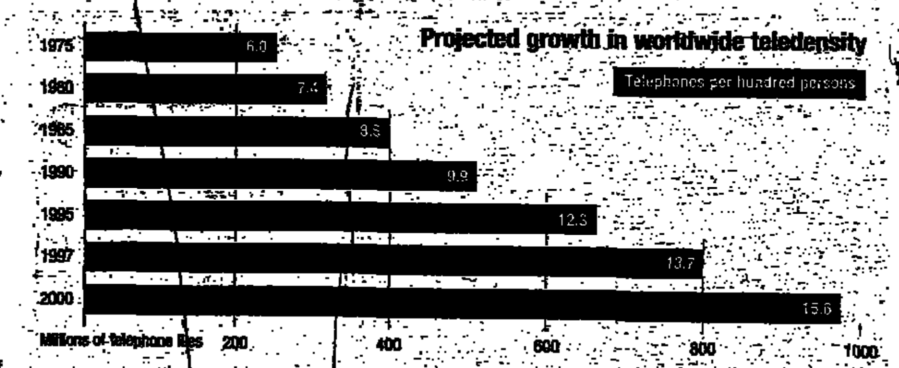
The rise of submarine cable capacity
Total system capacities (Gbps)



Source: TeleGeography

Staying in touch: financial staff using mobile phones in the City of London

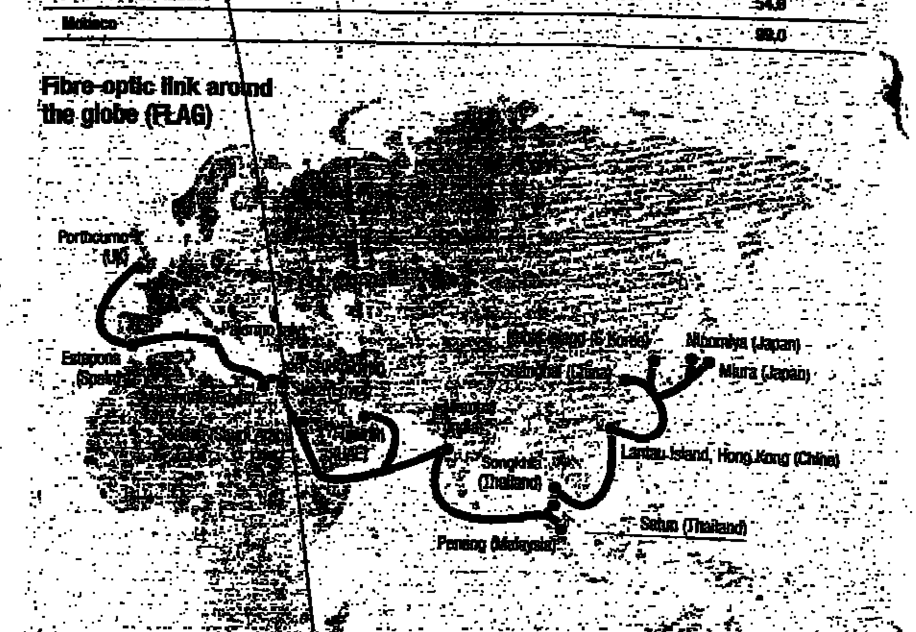




How teledensity is directly related to income

Part of the world	1996 teledensity
Cambodia	0.07
Low-income nations (excluding China)	1.2
All low-income nations	2.4
All developing nations	5.1
All developed nations	54.9
Monaco	99.0

Fibre-optic link around the globe (FLAG)



Sources: ITU; FLAG

Bell Atlantic has activated the first segment of the FLAG project between Japan and UK. It features two undersea cables each with 5.3 gigabits of capacity (120,000 circuits). Some analysts believe the radical increase in capacity will drive down telecom prices substantially, says the 1999 Technology *Forecast from PricewaterhouseCoopers Technology Centre*, website: www.pwcglobal.com/tech-centre

TELECOMMUNICATIONS SUPPLIER PROFILE
MCI WORLDCOM

US-based operator makes an aggressive dash for growth

MCI WorldCom's turnover exceeds $30bn. It has 75,000 employees and operates a 45,000-mile fibre optic network in the US and a 2,000-mile network in Europe

Less than five years ago, WorldCom was a little-known, US-based telecommunications operator trailing a distant fourth behind its domestic rivals, Sprint, MCI and the industry colossus AT&T.

Today, following the successful completion of the acquisition of MCI last year, WorldCom is the second largest long distance carrier in the US with direct connections to more than 33,000 office buildings.

It boasts a market capitalisation of more than $100bn, enough to threaten that of AT&T, is building what it claims will be the first pan-European network combining both local and long-distance elements and is, analysts say, the company most likely to succeed in the new, liberalised telecoms market. Jack Grubman, Salomon Smith Barney's top telecoms analyst, noted recently in justifying predictions of a doubling of the share price to $80-$90 by the end of the year: "There are few, if any, companies *anywhere that are* as large as WorldCom, that have WorldCom's growth potential and the visibility WorldCom has for continuation of top-line growth".

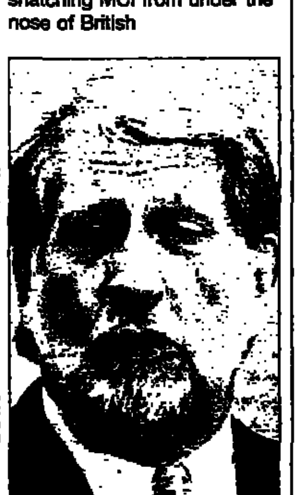
The company had, he said, the best strategic position in the industry. "We believe WorldCom remains the 'must own' growth stock in anyone's portfolio". (Salomon Smith Barney was adviser to WorldCom on its purchase of MCI.)

Two phenomena have combined to help catapult MCI WorldCom, as it is now known, into the front rank of international operators. One was the opening to competition of most of the world's major telecoms markets. The other is the spectacular growth of the Internet, which played to the strengths of carriers with sophisticated networks capable of carrying data traffic efficiently.

MCI WorldCom is both *fiercely competitive and the* operator of one of the world's most advanced data networks. The company's early years were marked by dramatic growth achieved through a frentic series of mergers and acquisitions.

The pace has not slackened. John Sidgmore, the company's chief operations officer, said it had made 68 acquisition in four years.

The most spectacular was snatching MCI from under the nose of British



Bernie Ebbers, president and chief executive – and the power behind MCI WorldCom's inexorable rise

Telecommunications in 1997 with a buccaneering, $37bn all-paper bid for the US long distance operator, a world record at the time.

It had earlier bought MFS, a US operator with a significant interest in Europe. MFS specialised in constructing fibre rings around major business centres giving it direct access to potentially lucrative business customers.

WorldCom's aggressive dash for growth raises a number of interesting points. First, it was able to afford to make so many acquisitions in such a short time because of *the astonishingly high values* which telecoms stocks have enjoyed in the US over the past few years. This has made it easier for US players to make share-based acquisitions overseas than vice-versa.

Second, it underlines the importance of ownership of assets in today's competitive environment. WorldCom has sought out companies to acquire which, like MFS, own their own infrastructure.

Mr Sidgemore explains that companies which own their own networks enjoy both lower costs, because there are no interconnection fees to pay, and higher reliability. Quality can be rigorously managed because calls are not "handed-off" to other operators. New products can be introduced faster because there is no need to move at the speed of others' technological development. "We like to control all the votes" Mr Sidgemore says.

It is also a significant player in the internet business through its ownership of UUNET, a leading service *provider. Satisfying the* regulatory requirement for the completion of the MCI acquisition meant, however, disposing of MCI's extensive Internet interests to Cable and Wireless of the UK.

The power behind MCI WorldCom's inexorable rise is Bernie Ebbers, its colourful president and chief executive. It turns over more than $30bn annually, has 75,000 employees and operates a 45,000-mile fibre optic network in the US and a 2,000-mile network in Europe.

Its other international interests include a controlling interest in Embratel, the only nationwide network in Brazil. It is building a digital network to link business centres throughout Latin America in conjunction with Telefónica Internacional, the international arm of the Spanish telecoms group. It was the first foreign-owned telecoms company in Japan to offer voice and data services over a *wholly-owned network in* Tokyo. It is half-owner with C&W of the Gemini trans-atlantic submarine cable which went into service last year. All of this supports analysts' contention that it is the only operator which owns US local and long-distance assets, undersea cable assets, a high capacity Internet backbone and international assets.

Its revenues are growing at about 20 per cent a year and it has low debt. Many experts believe that it is the international player best equipped to take advantage of the huge and growing demand for data and Internet protocol-based services.

Mr Grubman of Salomon argues that the key to success for an international carrier is to be able to serve multinational customers with cross-border services. "Considering that WorldCom has 4,000 city network rings worldwide and network facilities that cover two-thirds of global telecoms traffic, nobody can capture more cross-border traffic than *WorldCom," he enthuses.*

There are question marks, however, over the company's ability to manage its growth. "We have to learn how to remain agile," says Mr Sidgmore. "We want to be the world's largest small company".

Quality of execution is, of course, the key. Mr Ebbers has proved a daring and opportunistic deal-maker, but he has never run an organisation the size of MCI and WorldCom combined. It remains to be seen, for example, whether the cultural differences between the two companies can be smoothed away.

Operating synergies of $2.5bn are expected in 1999, increasing to $5.6bn by 2002 with capital expenditure savings of $2bn in 1999 and beyond. Whether management synergies can also be realised will be better understood in the early years of the next millennium.

Alan Cane

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LAUNCH OF THE EURO

Currency debut almost glitch-free

After a frenetic race to ensure that computer systems were able to cope with the euro, Europe's new single currency was launched with fanfares at the start of the year.

In London, some 30,000 City employees passed up their New Year celebrations to convert securities and bank accounts into euros.

But although there were no major disasters, a few technical glitches did occur. One concerned Target, the European Central bank's system for clearing high value payments. Due to problems in the Portuguese payments system, there were delays of more than an hour on some days in closing Target. But bankers said these delays had caused no significant problems. A few other errors were reported in foreign exchange settlement and securities custody.

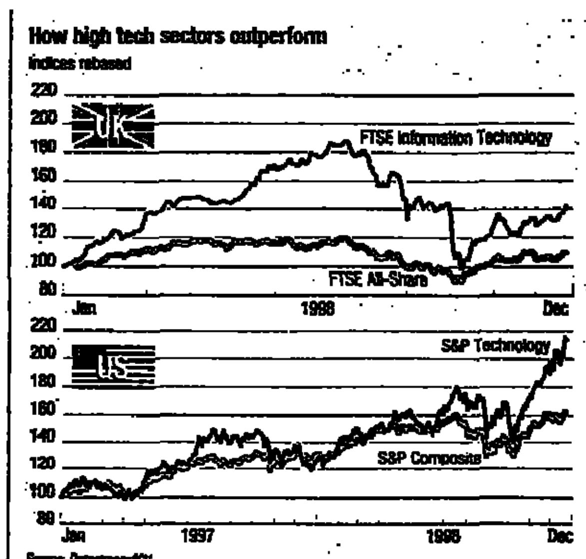
Some fund managers were concerned about the settlement process for early trades carried out in euros.

ECB officials said the Target delays were not caused by problems in the system itself, but some banks had experienced problems with wrongly routed or mishandled orders.

Target links the high value payments of all 15 EU countries, so operations at the centre can be held up by glitches in national systems.

Most banks had a trouble-free start for the euro. Above: bank customers in Milan, Italy, fill out forms next to a poster reading "euro è ora" (euro, it's now). Although euro banknotes and coins will not be in use before 2002, citizens of 11 European countries adopting the euro can have their bank accounts in euros and use credit cards to buy goods in the new currency. AP

How high tech sectors outperform



Source: Datastream/ICV

Rivals mount new threat to Windows

Oracle, the software company, is enlisting Sun Microsystems in its bid to compete with Microsoft, writes **George Black**

Oracle, the world's leading database vendor, is joining forces with Sun Microsystems, the workstation manufacturer, in its challenge to the Windows operating system of rival Microsoft. The two US companies have confirmed that they intend to develop new software which will compete directly with Windows.

The joint venture is expected to centre on the fusion of Oracle's database system, by far the most widely used in the corporate market, with Sun's Solaris product, a version of Unix, the most popular corporate operating system. Both companies will have the right to re-sell the resulting software as a single product.

Oracle will also try to negotiate licensing deals with other companies to sell the product. Oracle and Sun say they will launch the first fruits of their collaboration early this year.

The new operating environment is expected to use Internet browser software similar to Microsoft's Internet explorer and Netscape's Navigator to replace Windows at the user end of the system.

Windows at present has more than 90 per cent of the market in personal computer operating systems, although a much smaller share in the market for operating systems of more powerful machines and networks, where Unix and other older systems still predominate.

However, Microsoft's Windows NT product is rapidly gaining market share against Unix, Novell's Netware and the rest.

Oracle and Sun fear that NT may in a few years gain the same dominant status in the corporate server market as Windows has on the world's desktops. It is this fear that has preoccupied Oracle over the past couple of years and has driven it into the alliance with Sun to produce a radical alternative.

The dominance of Windows is at the heart of the anti-trust case brought by the US government and a number of US states against Microsoft.

Paradoxically, the marketing of a new Oracle/Solaris product could weaken the case that it has become impossible to compete with Windows in the market.

Sun has independently taken action to try to reduce Microsoft's dominance by announcing that it will give away its Java software free of charge to software developers. At the same time, it said it would allow other companies to manage part of the development of the language, which is seen as crucial to writing programs for the Internet and to developing electronic commerce.

Sun had been widely criticised for being slow to develop the language, which it invented and still owns.

It appears now to have responded to pressure to open up Java by licensing it to developers to encourage more rapid development and create a "pure" standard independent of Microsoft. Microsoft markets its own version of Java, linked to Windows.

□ Government witnesses are expected to conclude giving their evidence in the anti-trust suit against Microsoft this month. The case has resumed after a break for Christmas and New Year.

Microsoft has argued strongly that the take-over of its browser rival Netscape by America Online, the leading Internet services provider, undermines the case against it.

South Carolina has withdrawn from the suit because of that deal. Judge Thomas Penfield Jackson acknowledged that the deal marked a "significant change" in the market. But government lawyers have denied that it affects their case.

UK WHITE PAPER

Backing for e-commerce

The UK government has committed itself to creating a knowledge-based economy and spreading electronic commerce. In a white paper on competitiveness and a proposal for an electronic commerce bill announced in the Queen's speech to parliament, the government has marked a clear shift from its predecessor in promising a more interventionist stance aimed at modernising the country through the use of IT.

The competitiveness white paper stressed that rapid developments in information and communications technology were turning knowledge into the most important factor in economic growth. Britain was catching up with its competitors in this area, it claimed.

To accelerate the process it was necessary to stimulate those industries and encourage consumers to be more receptive to their products and services. The electronic commerce bill will allow digital signatures to be accepted as equivalent to signatures on paper and appoint "trusted third parties" to underwrite digital signatures as well as holding the keys to encryption systems.

Both of these proposals are likely to be extremely controversial. The first will be criticised because the best method of legitimising digital signatures is still hotly disputed among lawyers. The second has already been attacked by opponents who say that the government is seeking to retain control over encryption, disregarding the best interests of industry, which would like a free market in encryption products.

The government says it is prepared to consult industry over the details of the bill, but is unlikely to give up its position that encryption must be controlled. Licensing of systems is to be voluntary, but unlicensed systems will not have the same legal force as licensed ones, under the government's proposal.

There will, therefore, be strong pressure for electronic traders to use licensed systems. In the US, an official report on Internet commerce launched by President Clinton emphasised that the Internet should remain largely self-regulated, but promised limited government measures to boost the growth of electronic commerce.

E-commerce report: page 2

YEAR 2000

Small businesses ignore date issue

Just over half of British companies with between 10 and 250 staff and three-quarters of smaller ones have so far failed to act on the so-called millennium computer "bomb". This is revealed in a review of the country's readiness for the computer date changeover, one year ahead of the moment of truth, by the government taskforce Action 2000.

The review is generally optimistic, stating that key public services are "largely ready" and 90 per cent of large firms are on course to be ready to cope with the date issue. But small and medium-sized businesses remain "worryingly behind", which causes concern for the larger companies they supply.

Don Cruickshank, Action 2000's chairman, said he was especially concerned about these smaller businesses, adding that they needed more help from their large customers. Action 2000's managing director, Gwynneth Flower, said some companiess thought they had plenty of time left, others believed a simple solution would suddenly appear, and a further group thought the problem had been overstated. "They are wrong on all counts," she said.

Mr Cruickshank referred to a "tremendous spirit of behind-the-scenes collaboration" between big companies, especially those responsible for public services. "Rivalries, secrecy and competition have been set aside in a common cause."

This month, Action 2000 will make more detailed statements on the preparations in the power, telecommunications, finance, transport and water industries.

Vodafone launches bid for AirTouch

The rapidly changing telecoms sector is set for a further shake-up with UK-based Vodafone's proposal to merge with AirTouch in a deal valuing the US-based cellular phone company at some $55bn.

The move was aimed at putting Bell Atlantic, the US regional telecoms operating company, out of the race. Bell Atlantic has been preparing a bid for AirTouch worth some $45bn. Both companies have been in talks, but had yet to fix terms for a deal at the time of Vodafone's offer.

The success of Vodafone, which has grown rapidly since its formation 15 years ago – it is one of the top 10 UK companies, measured by market capitalisation – would create the world's largest mobile phone group.

Vodafone aims to structure the deal as a merger of equals, although the terms could change as negotiations progress. The announcement of the deal triggered off a further wave of speculation about other possible bidders for AirTouch. However, MCI WorldCom later ruled itself out of the bidding.

RESEARCH DIGEST

Optimism in the IT sector

Executives in high technology businesses are more optimistic about prospects for their own companies and the industry than for the worldwide economy, says a PricewaterhouseCoopers survey.

The average growth in the industry expected next year by the 376 executives questioned was 11.5 per cent, but they expected their own companies to grow by 25.2 per cent and the economy as a whole by only 2.7 per cent.

World market for personal computers up 12 per cent

The worldwide personal computer market is expected to show growth of 12.2 per cent in the fourth quarter of 1998 on the same quarter the previous year, according to International Data Corporation. This reflects the strength of the US and western European economies, as well as a return to growth in Asia Pacific and Japan. For 1998 as a whole, the PC market grew around 11 per cent and this year is expected to grow another 12.8 per cent.

Smaller companies will need to invest more in IT

Europe's top 500 buyers spent 4.2 per cent less on IT systems in 1998, according to a study by Spikes Cavell, the market research company. However, total spending on IT was up by around 8 per cent and the researchers forecast that it will grow another 8 per cent this year. The figures suggest that fear of recession is having some influence on larger companies' spending plans, but smaller ones may still have to invest much more to tackle the year 2000 and euro issues.

Better management data sought

The quest for better management information will be the main reason for upgrading systems in 1999, reports consultancy Tate Bramald.

The survey was conducted among 929 British finance and business executives, 64 per cent of whom gave better strategic information as their main objective. The need to achieve year 2000 compliance as well as euro compliance was stated as the main reason for upgrading by 47 per cent.

Information burden eases

Concern about "information overload" has diminished as people have begun to learn how to cope with it, says a study by Reuters, the international news and information supplier.

Only 42 per cent of managers now believe it is a problem, compared to 65 per cent the year before last. But in Hong Kong, 62 per cent said the overload caused their personal relationships to suffer, compared to a world average of 40 per cent.

In eastern Europe, many managers say they still do not have enough business information.

Systems market buoyant

The distributed systems management market is set to grow from $19.5bn this year to $27.9bn in 2003, forecast analysts at Ovum.

The improvement in service level management tools is good for in-house IT departments, which are struggling to prove to senior managers that they can cope with the job better than outsourcing providers, say researchers. New tools will enable them to demonstrate the contribution that IT makes to the business.

Asian demand will rebound

The Asia-Pacific region is likely to stage a comeback in demand for information technology products this year, according to analysts at Gartner Group's Dataquest subsidiary.

Personal computer end-user revenues from the region will grow by 18 per cent to around $18bn and server revenue will rise 6 per cent to $3.2b, it says.

Computer printer sales are likely to rise 6.5 per cent to $2.8bn. Dataquest said this would mark a recovery from the 1998 low figures, caused by the Asian financial crisis.

IT spending not clearly evaluated

Most companies admit they carry out no evaluation of their share of Britain's £28bn annual expenditure on information technology, says a report by the consultancy, CEC Europe.

Two-thirds of companies reported that they had no process by which they could satisfactorily measure the return on their IT investment. Yet 93 per cent claimed their IT strategy was in tune with the company's business plan. The report was compiled on the basis of responses by 105 senior decision makers across several industries.

THE MONTH IN BRIEF

IBM sells data network

AT&T, the US telecommunications operator, has bought IBM's data network for the unexpectedly high price of $5bn. The deal provides AT&T with a global data infrastructure, a huge base of corporate customers and more than a million individual Internet users. The sale is accompanied by a cross-outsourcing arrangement, whereby AT&T will provide IBM with network services and IBM will run many of AT&T's core computer systems.

Japan setback for SAP

SAP, the German software group, unsettled the stock market by revealing that sales problems in Japan would leave 1998 profits lower than expected. It said profits would show overall growth of around 15 per cent, well down on its previous estimate of a 30-35 per cent pre-tax increase. Results were also disappointing in Russia. Total sales were 40 per cent higher at DM8.4bn ($4.9bn), with expected growth this year of 20-25 per cent.

Sema wins Olympics contract

Sema, the Anglo-French computing services company, has won a high-profile contract with an estimated value of £300m to run the systems for the Olympic Games from 2001 to 2008. This followed IBM's decision to pull out of supplying the Olympics. Sema will take charge of the 2000 games in Sydney, the 2002 winter games in Salt Lake City, the 2004 games in Athens and the 2006 and 2008 events.

Siemens and 3Com joint venture

Siemens, the German electronics and electrical group, and 3Com, the US network equipment maker, are to form a $100m joint venture to develop systems for sending voice phone calls across data networks. The technology is expected to be adopted by call centres for connections to Internet sites and for videoconferencing between personal computers. The market for such systems is expected to grow to $4bn over the next three years.

Cisco buys router company

Cisco, the leading network equipment manufacturer, is buying Pipelinks, a developer of routers that can send voice and data over telephone lines and the Internet. Pipelinks is a privately held company in which Cisco has had a minority stake since 1997. Cisco said the $126m acquisition would help it to supply telecommunications operators with products for integrated voice and data transmission.

Thomson stakes sold

Four of the top international computing and telecommunications companies – Alcatel, Microsoft, DirecTV and NEC – have each bought 7.5 per cent stakes in the French electronics group Thomson Multimedia. Analysts say the company could be floated this year, but the future of the organisation depends on the French government's willingness to reduce its majority stake.

Scottish deal for Novell

Novell, the networking systems company, is buying a $1m minority stake in Edinburgh-based Orbital Software, an Internet search specialist. It is the first investment by Novell outside the US. Orbital was set up in 1995 by two former academics from Heriot-Watt University in Edinburgh. Its product, called Persona Server, is already offered with Novell Directory Services, one of the principal Internet searching systems.

Network companies combine

Global TeleSystems, a telecommunications operator in eastern Europe, is to buy Esprit Telecom, which has similar interests mainly in western Europe. Together, they could offer voice, data and Internet services to businesses across the continent. Global will pay £456m for Esprit. Neither is yet in profit, but they own a network of around 9,200km of high-capacity fibre cable.

Microsoft invests in Qwest

Microsoft, the personal computer software company, has invested $200m in Qwest, a US broadband network developer. Qwest aims to become one of the leading carriers of Internet traffic. Microsoft has bought only 1.5 per cent of the shares, but intends to work closely with Qwest on developing systems for electronic commerce.

Siemens to operate UK savings

The UK's National Savings department is to be run by Siemens Business Services in a £1bn, 15-year deal with the Treasury. Around 3,800 civil servants will be transferred to Siemens. National Savings records will be fully computerised and its sales operations will be expanded.

George Black
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TRAINING by John Kavanagh

Internet will make an impact across the board

Although more companies are using a combination of computer-based and traditional classroom courses, the World Wide Web is unlikely to replace expert professional trainers

Starting young: technology holds no fears for these children in Scotland who are interacting via video and telephone with pupils at other schools in their region

Mission-critical IT systems: as the financial community invests more in information technology than any other sector of the business world, it also calls for continuous IT training. A trader in the New York Stock Exchange, above, watches a computer monitor as IT stocks rebound AP

Compromise is replacing confrontation in IT training. Companies are takingthe view that new and traditional methods both have a role – no longer to the exclusion of each other but, increasingly, in combination.

The confrontation of the mid-1990s was perhaps inevitable as suppliers of computer-based training on CD-Roms attacked traditional classroom courses.

The traditional training companies responded by becoming outlets for their new competitors.

Now, the Internet is helping to bring the two together to meet training needs which neither can handle alone under all circumstances.

Justin McCarthy of Sybase: 'There's no substitute for interacting with an instructor'

Formal classroom courses still dominate IT training in revenue terms, accounting for between 75 and 80 per cent, according to various studies.

Key Note, the specialist research company, lists the strengths as the immediate availability of an expert professional trainer, who can adjust the speed and emphasis to match the students; the higher status attached to such courses; the fact that staff regard being sent on one as recognition of their value to their employer; and the formal certificate that people often get at the end.

Weaknesses are that courses are usually paid for in advance, so unforeseen absence, for example through work pressures, means the fee is lost; people are absent from the workplace; competent students can become frustrated if the course is held back by less competent people; and everything is covered in a single course on a single occasion, even though much of what is covered will probably not be used immediately.

Indeed, Sybase, the US software company, says studies show that information retained in a student's mind 24 hours after a classroom course is no more than 25 per cent at best and normally around 15 per cent.

Self-study computer-based training scores against some of these weaknesses: people do not have to leave their work-place and can fit studying round their work; this method is seen as cheaper, especially if licences allow many people to use the same product; and it can be dipped into at any time, for example to answer a query when a particular feature of a software product is needed.

However, weaknesses in computer-based training in turn fall prey to the strengths of classroom training. In particular, there is no expert on hand and it is difficult to design products that handle all questions well. Key Note also says that learning through self-study is usually spread over a longer period.

Enter the Internet. At its simplest, training through the Internet means accessing computer-based courses at a supplier's web site. At the other extreme there are courses combining self-study and class discussion led by a teacher. These can be online through Internet chat facilities, using the keyboard, or indirectly through electronic bulletin boards.

"Corporate databases, documents, presentations and computer conferences can now be woven together with Internet technologies and accessed through a web browser," says Richard Rimmer, who is a specialist consultant at PA Consulting Group.

Even so, the jury is still out on this latter approach. Some big suppliers have adjusted their targets in this area in the last 18 months and a further approach is now starting to emerge which brings all the others together.

Hewlett-Packard, Sybase, PA Consulting Group and others are moving to combinations of computer-based and classroom learning.

They are building pre-class and post-class computer-based sessions into their courses. "This approach allows students to assess their level of knowledge by looking at materials and taking tests before they go to a class," says Sybase education manager Justin McCarthy.

"If necessary, they can get up to speed on certain parts of the course before going to the classroom.

The web cannot replace the classroom experience, he says. There's no substitute for interacting with an instructor whose experience can help people learn what they need to know. Indeed, if people come better prepared to the classroom, the instructor can become more of a coach, fitting the teaching more precisely to individuals' work needs.

"However, the classroom, with its isolated learning events, can't match the need for constant skills enhancement and updating against change," he says. Sybase has found that keeping overall course length constant but cutting the number of days in the classroom by half – and mixing in online materials before and after – has increased retention rates.

In addition, it is finding that if people have the facilities to review the information after a week and then after seven weeks, retention rates exceed 60 per cent.

PA Consulting Group has also started using the combination approach where appropriate in management education programmes.

"One challenge facing a programme for a major client was how to continue the enthusiasm generated during the physical sessions when the participants dispersed to their different locations," Mr Rimmer says.

"Our Learning Net approach helped capitalise on that enthusiasm, providing a central point for communicating and sharing reference materials and working papers. It is now being developed from its support role to a resource that managers will use to share actions, information and progress as they take the learning from the programme into implementation."

Different training methods suit different topics and different people. One view is that office products are broadly well-suited to brief introductions and then access to a CD-Rom or Web site for short bursts of training on particular facilities when they are needed; and that technical IT subjects are best taught through a combination of preparatory computer-based materials, including automated tests to highlight gaps in knowledge, then intensive classroom training.

The research firm, Key Note, forecasts good continued growth for all approaches - but perhaps inevitably sees the Internet gradually making an impact across the board.

COMPUTER GAMES by Michael Dempsey

Small screen players graduate to Hollywood

The world of big-time entertainment is taking a close interest in digital games as their appeal spreads across the age range and visual quality improves sharply

Gillian Anderson, an actress from the X Files television series, smiles as she plays Fox Interactive's new X Files video game at an Electronic Entertainment show in Atlanta, Georgia AP

The computer games industry has matured into a global industry in the past 20 years. It emerged from popular home computers that now look puny and primitive beside today's desktop PCs. The mass appeal of games consoles like the Sony Playstation helped propel computer games into the league of big business.

Sony has sold 43m Playstations, creating a huge market for games products and spawning impressive rival developments in the process.

The computer games companies have a consumer electronics heritage, and their first focus is on releases planned for the next 12 months. But the demographic profile of computer gamers is changing. The next century will see games written for and played by both the very young and the very old.

In Germany, Tivola Verlag is selling eight games titles aimed at children of three and above. Nursery schools are a fertile selling ground for these games which it is claimed will help the development of hand to eye co-ordination in young children.

Lego, the Danish toys giant, has set up Lego Media, dedicated to producing computer games aimed at children of six and older. It expects sales to more than triple leap in 1999.

Mark Livingstone, Lego Media's worldwide managing director has his sights set firmly on the Internet. He believes that linking a recognised consumer brand to a secure and controlled method of accessing the Internet will bring huge dividends for a small number of players.

"Lego products will share in the real coming of age of the Internet through branded portals [access points] that parents know are safe for children to use." Sarah Radford, Tivola's UK managing director, believes that the advent of television quality images on PCs will bring games to a wider audience, and notes that the buying decision for games software is no longer made by young adult males preoccupied with shooting aliens. "It's amazing how many sales we make to grandparents buying CD-Roms for their grandchildren to play with when they visit."

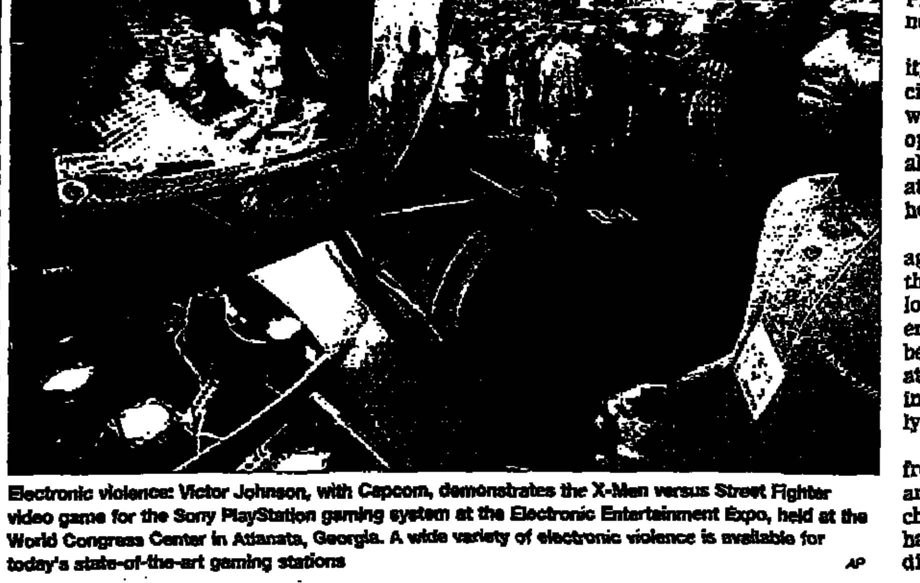
The world of the computer game is taking skills and tricks from the most advanced computer software used in business. SAS Institute, a privately-owned company, produces complex programs that hold and analyse vast amounts of corporate data.

In 1996, SAS spun off a team of software developers who operate in a wholly-owned but physically separate company, South Peak. The core of South Peak is an SAS technology called video reality, a technique of connecting video images to give the viewer 360-degree vision without any breaks or visible lines between the 90-degree segments of the view. Scenes from reality are captured on a video camera before being incorporated in South Peak products.

Doug Walker, the principal games' developer at South Peak's studios at Cary, North Carolina, used to work on development tools for the code behind the large industrial software from SAS. He is a complete contrast to the typical games developer, who usually becomes involved in the industry through personal enthusiasm.

But Mr Walker and South Peak illustrate how technology is crossing over from the mainstream of IT to produce new and lucrative games. "The development work for one of our best-selling games, Temujin, cost \$2m. But we can use the techniques employed in writing it elsewhere."

With the elimination of pixels and blocky images and the detail that comes from videoing the games environment, South Peak thinks it can win over games players who are bored with the current standards of animation.



Electronic violence: Victor Johnson, with Capcom, demonstrates the X-Men versus Street Fighter video game for the Sony PlayStation gaming system at the Electronic Entertainment Expo, held at the World Congress Center in Atlanata, Georgia. A wide variety of electronic violence is available for today's state-of-the-art gaming stations AP

Pictures on video screens comprise triangular atomic shapes measured by polygons per second (PPS). Nvidia, a Californian company that makes graphics processors for personal computers and PC components, predicts that video quality will improve dramatically from a current rate of one million PPS to 25m PPS over the next decade.

While the the visual quality of games will match the cinema, the film industry will merge with games developers. This process is already under way at Creative Edge, a games software house in Scotland.

David Wightman, the managing director, points out that small companies will no longer be able to produce an entire game. Expertise will be bought in and amalgamation will take place, mirroring the recent history of Hollywood.

"Photo-realism will come from high resolution chips and screen technologies. The characters in each game will have far more detail, so art directors will become involved and development will become more expensive.

No one operation will build an entire game, so teams will come together with one group for character development, one for animation, one for background scenery and so on."

The economics of the industry will change, with far less left to chance as games development becomes as sophisticated as the production of Hollywood blockbusters. "More planning and investment will be needed to guarantee a return," says Mr Wightman.

This means that successful games will automatically generate sequels. The phenomenal success of Eidos, a UK games company, with the character of the curvaceous Lara Croft appearing in three successive Tomb Raider games selling 10m copies worldwide, paved the way for this trend. Eidos has already sold film rights for this brand to Paramount Studios.

Mr Wightman notes that ownership of brands will be critical in this commercial environment. "In 10 years time, our company will be a media exploiter, licensing rights to games merchandise."

Cable TV will become a prime delivery mechanism, with players subscribing to games services and channels. Creative Edge is already talking to MGM Studios in Los Angeles about collaboration between its graphics experts and the animation programmers for future movies.

Companies like Sony and Nintendo also see themselves as competing in the entertainment sector, although their consoles employ top-end graphics technology from the IT industry.

In the first decade of the next century, this field of entertainment will see tens of thousands of players joining in multi-player games over the Internet while domestic users of cable TV channels find themselves acting as characters in infinite variations of successful films that may have grown out of the script for games adventures.

The boundaries between the games industry and other entertainment sectors will become increasingly irrelevant. With entertainment giants ready to make massive investments, games are now a global business.

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VIEWPOINT: JAMES MARTIN, IT guru

No Utopia in a world dominated by computers

As IT pervades business and society, the next century will belong to those who can master the complexity of life in a fast-changing digital environment, says James Martin, interviewed here by **Michael Dempsey**

James Martin is a spry 65-year-old who has helped define the shape of the software industry and has strong views on the impact of information technology on business and society.

Popularly known in the IT industry as "the father of computer-aided software engineering" (case), a disciplined approach to developing large programs, UK-born Mr Martin founded two successful software consultancies after 19 years with IBM.

But the decades of working, lecturing and writing 101 books relating to technology from the US, Ireland and Bermuda have not diminished his very British character. Mr Martin retains a dry humour and an admirable distance from some of the more enthusiastic advocates of advanced technology for its own sake. "The sugary euphoria that is almost a mandatory part of every company annual report is irrelevant."

He is working on his next book, forecasting technology developments over the first 10 years of the 21st Century. With the working title of "Chain Reaction", it is aimed at explaining future technology for the layman. But in common with most of Mr Martin's titles, it will have a strong business flavour.

One of his best-known books, *The Wired Society*, was published 20 years ago and predicted the rapid growth in data transmission over networks and the use of electronic funds transfer in the financial sector.

But he admits that his own predictions fall into two categories. Some developments can be tied to a mathemathical measurement and be made with a high degree of certainty. Others remain extremely subjective. And the exponential growth of technology is undermining the number of predictions that can be measured.

"There are certain statements you could make in the past, such as assessing the growth in the capacity of computer chips, which were very likely to be correct. But now the explosion in telecoms technology is outstripping every assumption made over the last 30 years.

Some fibre-optic links deal with 100bn bytes of data a second and research laboratories are dealing with transmission in the order of a trillion bytes a second. Technology like this will mean trunk access to very remote computers at extremely high speeds."

Mr Martin foresees the digital television screen growing in size before yielding to wall screens embodying a very high quality of sound and picture. "Ultimately, the wallpaper itself could consist of computers. Homes will be full of addressable processors – you could have *thousands of* Internet addresses in one house."

He recognises that the all-pervading processor is not a recipe for Utopia. "As the Internet spreads, we will confront an absolute deluge of data. So the data warehouse will be very important. We will need new techniques to derive insights from all of this data."

Mr Martin believes that the crisis of data-overload will rejuvenate research into artificial intelligence, but that this will take an entirely different direction from past attempts to replicate human thought processes.

"Artificial intelligence has failed, failed totally. The human mind is incredibly subtle and complex – you simply could not design the human mind."

Just as the human mind finds IT difficult, Mr Martin thinks the real computer intelligence to exploit masses of data will need tough types of logic involving huge numbers of extremely powerful processors working in concert.

The latest impressive measure of computing capacity is the Teraflop, a trillion floating points per second. But Mr Martin is focussed on the Peta, a measure of 1,000 Teraflops.

Martin: "Twenty years from now, business in the Pacific Rim will recover and see another era of spectacular growth'

The initial drive behind this technology will be *nuclear weapons research*, says Mr Martin, a former Pentagon adviser. His evident concern over the threat posed by the nuclear testing contest between India and Pakistan is balanced by the thought that massive data warehouses drilling information out of the avalanche of data will emerge from the machine that works in Petas.

Mr Martin takes the *business of future-gazing* seriously, an attitude that has brought him into conflict with Arthur C. Clarke, the British-born science fiction author. Mr Clarke is frequently credited with inventing concepts such as the communications satellite. But Mr Martin points to Mr Clarke's habit of churning out predictions, noting that many of his forgotten forecasts have *come to nothing*.

Annoyance with 'dangerous predictions by fiction writers'

Mention of Mr Clarke provokes a flash of emotion. "It is very dangerous to use fiction writers to predict the future," says Mr Martin. They are in the business of entertainment."

His anger with Mr Clarke is part of Mr Martin's wider annoyance with the lack of intellectual rigour in both IT projects and business ventures. "To understand the long term, you need a very broad vision."

Looking back at his past predictions, Mr Martin admits his own mistakes. "When I wrote *The Computerised Society*, I was wrong about the likely spread of computers. The PC has moved away from the corporate world and into the realm of the common man much faster than I expected. I had predicted the computer would remain the property of the technical boffins. I didn't spot the way the Internet would bring data to anyone who wants it."

This oversight fits in with a pattern Mr Martin has recognised in views of the future. "People under-estimate the speed at which ordinary people get to grips with technology and learn to get more out it."

The social impact of IT is a recurrent theme in Mr Martin's writing. He admits that he under-estimated the way an affluent society would opt for more expensive consumer goods – with many people putting in longer working hours to pay for them – rather than demanding greater leisure time. But *the price of having* a highly productive computer literate workforce will continue to be high. "It has led to intense social competition. There is a very high level of stress in US society, witnessed by the number of people on Prozac."

Mr Martin thinks the next century will belong to a relatively narrow segment of society, comprising those *who can cope with the* complexity of working life in an IT-dominated world.

"Some people are masters of complexity. But only a very small proportion of society can learn how to deal with the kind of changes that are coming." This new ruling class can already be seen in the rise of incredibly wealthy individuals who are at home in a global trading environment. "George Soros earns more money than McDonald's – and McDonald's has 160,000 employees."

Despite the current slump in Asia, Mr Martin is convinced the region remains a strong long-term prospect. "Twenty years from now, the Pacific Rim will recover and see another era of spectacular growth.

"China will be run by very very rich people in Shanghai and Beijing who will be relying on much better communications and text transmission to pursue their businesses. You'll get clever people all communicating over vast distances and becoming part of a community of virtual clubs of the bright."

The mass of the population will still hook up with the Internet through a more capable device born out of the TV set. But Mr Martin is guarded when pressed on the fate of today's commercial giants in this game. "I don't think that mass access to electronic commerce can be made very easy if the Microsoft operating system is the backbone of the network."

He hints at the vulnerability of very large organisations. "The last act of a very powerful regime is *to produce* a 1,000-page standards manual. I'm not saying this is Microsoft yet, but ..."

Companies that are wired into computer networks with massive bandwidth will have the capacity to exploit networked data and change shape quickly. Mr Martin thinks these operations will be the commercial stars of the next 20 years.

Computers everyhere: traders on the Boston Stock Exchange, just before the closing bell. The New York Stock Exchange has long been dominant among US exchanges, but in recent years regional stock exchanges in San Francisco, Boston, Chicago, Philadelphia and Los Angless have been taking away some of the NYSE's business

'HAVES AND HAVE-NOTS' IN A NETWORKED WORLD by George Black

An expanding role for IT brings looming social risks

For millions of people excluded from the benefits of new technology and the Internet, the result could be increasing resentment and alienation

Information technology may be about to transform the world, but many professional futurologists – especially those advising governments – are worried that it will also sharpen the divisions in society.

They paint a very different picture of the world in the new millennium to that which is promoted by IT vendors and IT enthusiasts, seeing a growing split between "information haves" and "have-nots".

While the more affluent may have intelligent software agents working diligently for them, searching the Internet for luxury goods and services, the poor may become more and more alienated. They are likely to be as intimate with the Internet as they are with the Ritz hotel – namely, not at all.

The political jargon in industrial countries, a number of which are now ruled by centre-left governments, is "social exclusion".

Governments are in favour of more information technology but afraid of socially regressive consequences.

Exclusion could take various forms. First, there is the impact on the job market. Some academics regard mass unemployment as the inevitable and permanent consequence of the IT revolution.

On the other hand, it is argued that IT, like other technological advances in the past, will ultimately create more jobs than it destroys and that these will typically be more desirable.

There is general agreement, however, that moving millions of people from outdated industrial skills to IT-based skills is a massive challenge. The size of the unemployable underclass may grow. Jobs will go to those who acquire IT literacy. But in most industrial countries, personal computer ownership extends to only around a quarter of the population and is skewed strongly towards the upper socio-economic groups. Some 6m homes in the European Union still do not even have a telephone.

Governments' response is to stress the need for lifelong learning. In the UK, for example, the government is investing heavily in the concept of a National Grid For Learning to help reduce social divisions and spread education more evenly.

Another type of exclusion is exclusion from goods and services. Information technology could be harnessed to disenfranchise unfavoured classes of people.

It is a common fear that companies use computers to keep track of people's behaviour and increasingly there is a rational basis for that *fear*.

IT is now used to assess people's potential as consumers; if they deviate too far from the norm, they could be cut off. Banks will stop credit, retailers will withdraw offers or place their outlets in areas where there are "better" customers. Is it politically acceptable for shops to be out of reach of the poor and the old?

Digital television and the Internet could put more information services into the hands of those who can afford it – but exclude the rest

The way in which large corporations use personal information, therefore, looks likely to be controversial in the new millennium. As data protection laws become tighter, companies will be compelled to be more open about why they hold data. Using it to discriminate against certain categories of people could get a company a bad name.

The poor and the old could be further excluded from many types of goods and services by being the only users of cash – and thus having to pay a premium – when more prosperous people have gone over to electronic money. The poor could be forced to live in a sort of "cash ghetto" of the economy.

At some point, governments may decide to switch off cash and make all money electronic. Perri 6, director of policy and research at Demos, the UK think tank, raises the possibility that governments may have to impose a statutory duty on financial institutions to provide equal service to everyone.

The dangers of mass exclusion may shift governments gradually towards a less *laissez-faire* view of social policy. In a report called *Towards a Global Information Society*, the Organisation for Economic Co-operation and Development, the Paris-based economic think-tank, argued that policies *must be designed to spread* the benefits of information technology.

It emphasised the need for stimulating greater competition in IT markets and introducing measures to protect the vulnerable. Specifically, it called for breaking down the barriers between telecommunications, broadcasting and cable networks, creating broader access to communications networks and digital services, reviewing the regulatory framework and including digital services within universal service criteria for telecommunications operators.

Similar concerns trouble Britain's left-of-centre Institute for Public Policy Research. Access to information is inseparable from access to communications, argue Cristina Murrow and Nick Irvine in the IPPR publication *Access Matters*.

'High roller room': Chinese investors gather round computer monitors at the Shanghai Securities Exchange

Whereas traditional information was made available *through the telephone, most* new information services require a computer, which is much less widely available. Digital television and the Internet could put more information services into the hands of those who can afford it, excluding the rest.

The US has established a special fund backed by the Federal Communications Commission to support a universal service obligation, not only to support remote and unprofitable areas but also encompassing schools, libraries and hospitals.

According to Dimitri Ypsilanti, science and technology director at the OECD, this is still more of a noble aspiration than a working project, but it is probably further advanced than anything in Europe, where governments are still apparently weighing up their options.

Their hesitancy is partly due to concerns about intervening in the market to back a particular technology which could eventually turn out to be the wrong one.

Partly, they are constrained by the problem of having to require telecommunications operators both to compete more vigorously with lower prices and to offer what is, in effect, a charitable service.

Policy advisers are remarkably unanimous in their concerns. Governments, however, are slow to frame measures which could help to alleviate the dangers ahead.

In India, a telephone engineer checks communication links in the crowded streets of Calcutta

YEAR 2000: FOCUS ON THE NUCLEAR INDUSTRY by Christopher Price

Planning for the worst, hoping for the best

Around the world, nuclear power experts have been striving to ensure that the millennium changeover is disaster-free. But checking all risks is a daunting task

There is a dilemma at the heart of the debate over the millennium computer "bomb": the authorities' wish to publicise the issue must be made at the risk of spreading undue concern.

Nowhere is this dilemma more obvious than in the nuclear industry. The potentially catastrophic consequences of a nuclear accident have led to some high-profile initiatives by western governments to tackle the year 2000 issue – or "Y2K" as it has become known in the computer industry.

However, it has also led to discussions over the state of other countries' nuclear industries being sometimes glossed over.

Last August, for example, confidential minutes emerged from a meeting of the Group of Eight industrial nations and the European Commission expressing serious doubts over the ability of developing countries to tackle the year 2000 computer date problem in their nuclear industries.

The concerns were made after the meeting discussed a report on global readiness for 2000, when some computer systems and electronic products with embedded chips will be unable to recognise the change of date from December 31, 1999 to January 1, 2000.

The report expressed concerns over the lack of skilled labour available in many non-western countries to address the millennium computer "bomb" issue.

Eastern Europe was one of the areas highlighted as being of particular concern.

While much attention has been given to the nuclear defence sector of Russia and Ukraine, the preparations, or lack of them, by the former Soviet Union's large nuclear power industry has gone largely unreported.

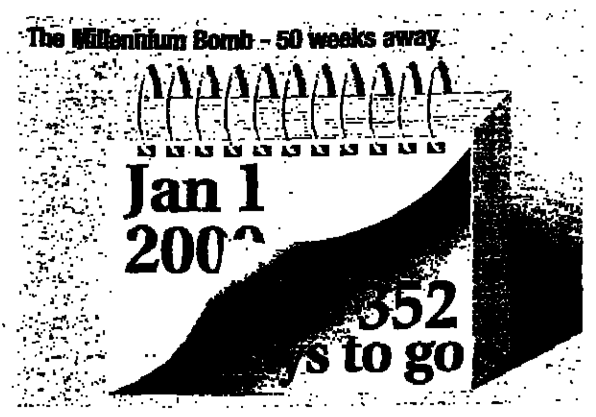
With memories of the Chernobyl disaster still strong, confidence in Russia's ability to ensure the safety of their nuclear plants is not high among western experts.

In particular, doubts have been expressed over whether the country has enough engineers to tackle potential year 2000 problems among its 29 civilian nuclear reactors. There are a further 11 plants in the former Soviet bloc countries.

However, in a recent Financial Times interview, Vitaly Tolstonogov, director of the Chernobyl power station, said that a simulation of the millennium bomb had been performed recently on a reactor of similar manufacture to the one at Chernobyl in the Ukraine. The tests found the reactor to be safe. "From our standpoint, the reactor is safe," he said.

Analysts also point out that the former Soviet Union's plants are older and use fewer computers and embedded chips than the more modern types used in western countries.

However, Serhiy Parashin, a former director of Chernobyl, is less optimistic. "The main danger is that we simply don't know what will happen," adding that the best hope for plants of the Chernobyl type is that if the primary system fails, the reserve diesel generator should start. Should it not, everything would simply halt – in theory at least.



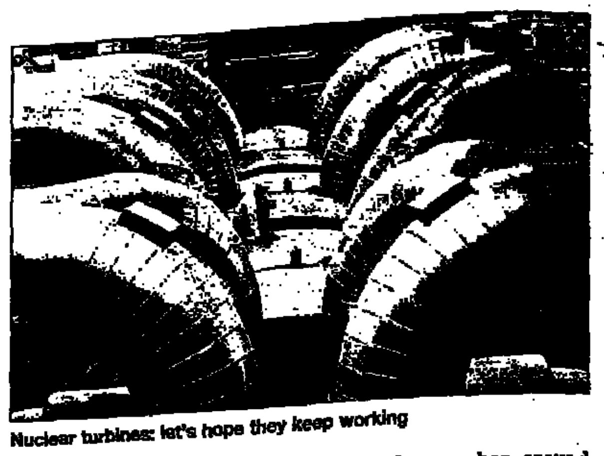
But as the Chernobyl disaster demonstrated in 1986, systems can fail and situations can get out of control.

One of the biggest challenges facing countries with a large number of plants, according to Steve Watkins, year 2000 programme manager for BNFL Magnox Generation, the UK nuclear generator, is attempting to quantify the scale of the problem.

"In an industry like ours, where safety is paramount, you have to assume the very worst. Everything must be checked. We have to prove everything."

The proof has to be verified by the various authorities in the UK which regulate the nuclear industry. For example, BNFL Magnox Generation's eight nuclear plants have run date change tests from 1998 to 1999, and from 1999 to 2000, which are checked by the Nuclear Installation Inspectorate. It then issues each plant with a Justification of Continued Operation certificate, without which the plant could not operate.

Mr Watkins says one of the key differences between the nuclear industry and many other industries is that its year 2000 problems are being solved as a matter of safety rather than for commercial reasons. "This has kept our focus on safety," he says.



Nuclear turbines: let's hope they keep working

Britain's millennium "bomb" programme for the nuclear industry began in earnest three years ago. It was among the first initiatives to investigate the problem, and its subsequent actions have formed the basis of the code of practice on embedded systems for both the Health and Safety Executive and the Institute of Electrical Engineers.

One of the most important checks to be made is with suppliers, particularly third party ones. "We have not relied on any of our third party suppliers telling us that they are Y2K compliant," says Mr Watkins.

BNFL Magnox Generation, which owns the oldest British nuclear stations after the modern ones were bought by British Energy, has around 8,000 suppliers, 900 of which are important enough to warrant checks on their year 2000 compliance.

BNFL Magnox Generation's strategy for preparing for a difficult situation up to 2000 has involved whittling down its suppliers to an emergency figure of 20.

However, Mr Watkins is sure that the steps taken and in hand will be enough to combat the millennium challenge. "I'm confident that we will have mitigated the risks to the minimum."

□ Case studies on how various industries are approaching the Y2K issue will be featured in the FT-IT Review during the coming months.

LOOKING AHEAD

FT REVIEW OF INFORMATION TECHNOLOGY

FT-IT REVIEW THEMES

New IT strategies for digital business and finance in 1999

The Internet and e-commerce will be prominent among the themes featured in the FT Review of Information Technology this year as companies and their customers move increasingly online

Changes in the IT industry itself will be the main focus of the next issue of the FT-IT review on March 3, 1999. This issue will also examine the impact of IT on the media world and look at the IT systems used by the new European Central Bank.

From this month onwards, the review will carry regular features on:

□ IT in finance, with a special focus each month.
□ Electronic business.
□ The millennium date issue.
□ IT news update.

Each issue will include a main theme, with a cover story on a topic of key importance to IT users, together with views from leading suppliers in the IT industry, plus our regular IT News Update.

Business Solutions Series

During the year, there will also be a series of special issues on Business Solutions in the areas of knowledge management, enterprise resource planning; plus managed services and outsourcing; plus a special issue on e-business, (see details below, in next column).

March

□ **Main theme:** This month, the world's largest IT show takes place in Hanover, Germany, and our main theme will be: The IT Industry in transition.
□ **Second theme:** IT and new media.
□ **Plus our regular features,** including:
□ IT in finance – focus on the European Central Bank.
□ Electronic business.
□ Update on the millennium date issue: how various sectors are tackling the problem.

April

□ **Main theme:** Internet issues.
□ **Second theme:** Java update.
□ **Plus regular features,** including:
□ IT in finance - focus on insurance.
□ Electronic business.
□ Update on the millennium date issue.

May

□ **Main theme:** Mid-sized enterprises – selecting IT strategies.
□ **Second theme:** Telecommunications – increasing convergence in information and communication technologies.
□ **Plus regular features,** including:
□ IT in finance – focus on venture capital.
□ Electronic business.
□ Year 2000 update.

June

□ **Main theme:** Windows – what's at stake?
□ **Second theme:** IT in manufacturing: focus on the cad/cam sector.
□ **Plus regular features,** including:
□ IT in finance – this month's emphasis is on personal finance.
□ Electronic business.
□ Year 2000 update.

July

□ **Main theme:** Electronic commerce and the wired business.
□ **Second theme:** IT and the law in the run-up to the year 2000.
□ **Regular features, including:**
□ IT in finance – focus on retail banking.
□ Electronic business.
□ Update on the millennium date issue.
There will be no issue of the review in August.

September

□ **Main theme:** IT in retailing.
□ **Second theme:** Supply chain management.
□ **Plus regular features, including:**
□ IT in finance – focus on risk management.
□ Electronic business.
□ Year 2000 update.

October

□ **Main theme:** Continuity planning ahead of the millennium "bomb".
□ **Second theme:** IT in education.
□ **Plus regular features,** including:
□ IT in finance – focus on investment banking.
□ Electronic business.

November

□ **Main theme:** Continuity planning for the year 2000 (II).
□ Second theme: IT in travel and leisure.
□ Plus regular features, including:
□ IT in finance – focus on fund management.
□ Electronic business.

December

□ **Main theme:** The Cyber Millennium.
□ **Second theme:** IT in the search for the stars.
□ **Plus regular features,** including:
□ IT in finance – focus on securities markets.
□ Electronic business.
□ Focus on the imminent year 2000 date issue.

Special mid-month issues on e-business and business solutions

During the year, we will also include a series of extra reviews on key business issues:
□ E-Business.
□ Knowledge Management.
□ Enterprise Resource Planning.
□ Managed Services and Outsourcing.

For more information

Editorial synopses: For more details of the next two issues of the FT-IT Review, please use the special fax-u-back service on: 0990 209 903. (Callers outside the UK dial exit code: +44 990 209 903). In the event of problems, send a fax request to Rowena Carr-Allinson, FT-IT Review on 0171 873 3197, or e-mail: Rowena Carr-Allinson@FT.com

Advertising: full details plus e-mail addresses relating to the FT-IT Review and the Business Solutions series can be found in the information panel on page three of this current issue, or write to the Financial Times, Number One, Southwark Bridge, London, SE1 9HL.

TRANSPORT SOLUTIONS by Geoffrey Nairn

How IT will help to ease travellers' frustrations

Experts want to make life easier for users of road, rail and air transport through the systematic application of IT, but they are mostly against cars being favoured over public transport

Utopia is the name of a computer system that attempts to control traffic in the crowded Italian city of Turin. The name is well chosen, for the history of transport planning has often been one of impossible dreams.

Today, however, there is a new urgency to find solutions to chronic traffic problems and transport telematics – the application of IT to transport – has emerged as a key technology to help realise the vision of modern transport networks that successfully balance conflicting needs.

"We are at a turning point as far as transport telematics is concerned," says Petra Mollet, executive director of Polis, an organisation of over 50 European cities investigating telematics projects to improve mobility and the environment. After a decade of research and development, analysts say transport telematics is poised to enter the commercial mainstream.

SRI Consulting, a US consultancy, estimates that the market in North America, Europe and Japan could generate cumulative sales of $200bn by 2011. Some of the most promising uses identified by SRI are technologies to manage commercial vehicle fleets, advanced traffic management systems, electronic toll collection and public transport management.

The IT industry has woken up to transport telematics. In 1998, Intel and Microsoft unveiled PC technologies designed to run telematics applications in cars. Nokia, the Finnish telecoms equipment supplier, is also keen to enter this market with products that incorporate technologies such as the Internet, GSM wireless networks and Global Positioning System satellite-based vehicle tracking.

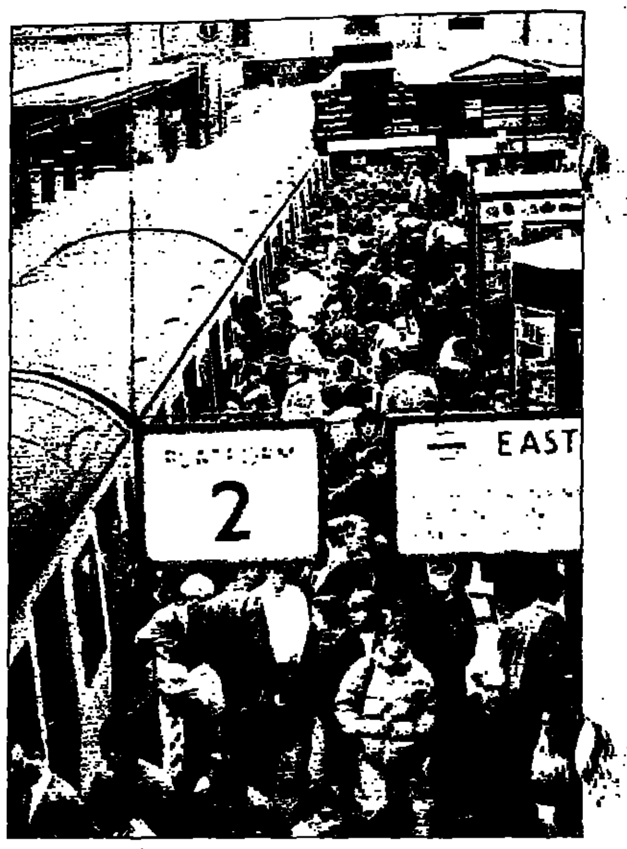
Analysts say more than 8m cars in western Europe and 2.7m in the US will have mobile location devices by 2005, creating a mass market for onboard navigation systems, emergency locator services and other applications. "Transport telematics opens a new world of applications that we probably cannot imagine today," says Razvan Olosu, Nokia sales manager for smart traffic products.

Several carmakers plan to install Nokia telematics products in their vehicles during 1999, the company says. But transport telematics is not just for the benefit of car drivers, though inevitably this attracts most commercial interest. Airports, ports and railways can all gain from technologies to reduce congestion and improve safety.

Polis sees one of the most rewarding areas for telematics in creating multi-modal transport systems, which allow goods and people to undertake "seamless" journeys across different transport networks and national borders. This idea is highly relevant to Europe as the free movement of people and goods spurred the creation of a united Europe – and the euro.

Today, however, the demand for greater mobility is constrained by the limited capacity of transport networks; the consequences are readily visible in any congested European city or airport. One of the key aims of transport telematics is to address traffic problems in an integrated fashion and so avoid the piecemeal and partisan planning that has plagued transport policy in the past.

"Integrated transport systems is the big issue," says Ms Mollet. "No single telematics application is going to be the panacea so we have to integrate applications into transport policy as a whole and get co-operation between different actors."



Crowds throng London's Earls Court Station: transport telematics could reduce the problems *Tony Andrews*

Example

Turin, like many European cities, has a growing traffic problem exacerbated by the inexorable rise in car ownership and the decline in public transport usage. As the home town of Fiat, Italy's largest carmaker, Turin is understandably reluctant to adopt punitive anti-car measures.

The city has instead turned to telematics solutions and, in particular, integrated transport management with a scheme called Telematic Technology for Transport and Traffic in Turin (5T), funded by a consortium of seven companies from the public and private sectors.

The 5T initiative involves 10 telematics applications, including: variable message signs to warn motorists of congestion or show the nearest available parking space; systems to give public transport priority at traffic lights; and bus stops that provide real-time information on when the next bus is due.

The technologies by themselves are not revolutionary and are widely used elsewhere. Turin has, however, gone further than most in co-ordinating the different systems to build what experts call an Integrated Road Traffic Environment.

Travellers can access real-time multi-modal information – over the Internet, for example – before setting off and during their trip. Moreover, the whole traffic network is managed according to actual demand and strategies designed to favour public transport.

Field trials conducted in 1997 demonstrated that the 5T initiative cut journey times by up to 19 per cent for public transport and 22 per cent for private traffic. The scheme is limited to a handful of major roads, but if it were extended to the whole of Turin, the city estimates it would reduce average journey times by 25 per cent, cut pollution by 18 per cent and yield energy savings of 18 per cent.

Yet despite the promise shown by this and similar projects, proponents of transport telematics complain of the lack of political consensus – and funds – needed to implement schemes on a wider scale. "A lot of transport telematics is very politically sensitive," says Ms Mollet.

She worries that developing nations may overlook transport telematics in their rush to embrace private car ownership and emulate richer nations. Polis recently conducted a survey of cities in eastern European countries, some of which are candidates to join the European Union. The findings were a disappointment to Polis as they revealed that policymakers gave highest priority to building new roads and parking spaces.

Schemes to encourage inter-modal transport and improve the reliability of public transport came bottom of the list. "Eastern Europe may make the same mistakes as their neighbours in the west in scrapping public transport," says Ms Mollet, who is also dismayed at China's recent decision to promote the car over the bicycle.

One of Polis' new priorities is thus to develop low-cost telematics applications designed to appeal to the limited budgets of developing nations. But persuading them to keep the car at bay will be no easy task.

VIEWPOINT: RAY HAMMOND, IT guru on attitudes towards the online world

Intriguing possibilities

The US and Europe have different cultural attitudes to information technology, says Ray Hammond, interviewed here by **Mark Vernon**

□ **"The UK lags behind the US by 21 months and five days in terms of its online development."**
□ **"Ninety-five per cent of businesses in Europe have not yet begun to think about becoming virtual."**
□ **"The bandwidth problem will be solved by 2002."**
□ **"In 1999, Europe will realise that the apparent over-evaluations of Internet brands are actually worth every penny."**

***

Predictions are the stock in trade of the IT futurist. This clutch falls from the mouth of Ray Hammond within a few short minutes of meeting him. It suggests showers of commercial opportunities for online business over the next few years.

But it is the precision of Mr Hammond's oracles that is particularly notable and which makes his audiences sit up and listen. For although it is impossible to under-estimate the impact computers will have on the world, correctly anticipating the form this will take is another matter entirely.

British-born Mr Hammond is a syndicated columnist, author of a number of best-selling books, and a regular on the international lecture circuit. Arguably his most important book was the almost evangelistic *Digital Business*.

He is a vocal, penetrating and highly critical analyst of the Microsoft empire, headed by Bill Gates. Currently, Mr Hammond is thinking about the philosophy of the Internet age. But how can he pinpoint the extent to which the UK lags the US to within a day? And of what possible interest can such an insight be?

The calculation is in part a rhetorical trick. It was just over two months ago – on November 5, 1998, to be precise – that British Telecommunications carried more data than voice on its UK network for the first time. AT&T reached the same milestone in the US just 21 months and 5 days previously on February 1, 1997.

"This is not a absolute measure of the lag, but it is a good indicator," Mr Hammond explains. The immediate reason for the differential is obvious. American citizens, whether at work or play, are far happier communicating electronically than Europeans, whether by e-mail or video conferencing.

But there are deeper cultural issues at work here, too. American culture looks to the future because it has so little past. "When I go and talk in the US, the response is in the affirmative, a 'yes'. But when I am finished on the stage, say in Scotland, the response is a mumble of 'I don't knows' and 'It wouldn't happen here'. America has the advantage of a cultural readiness to embrace the new world."

On a more abstract level, the lag results from a confusion of what is intangible with what is unreal. "Business managers think that paper is real because it is physical, whereas the screen is unreal because it is virtual," Mr Hammond says. "But we are by nature virtual animals, ever since we painted pictures on cave walls."

Hammond says 'Europe still has big hurdles to overcome'

And on a rather less romantic note, it is the "unnatural" resistance to virtuality today that is preventing European commerce from relieving the pressure of physical transactions in business processes and reaping stupendous savings as a result.

"Consider the case of a 35-year-old woman in a large company with a good career," Mr Hammond says. "She finds out she is pregnant. Not wanting people to know, she asks

Turn to page 16

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SUPPLY CHAIN FORCES YEAR 2000 ISSUE

Companies having to replace business applications in 1999 need to take a hard look at what they are buying and why if they are to avoid becoming a business failure.

The problem that many haven't recognised is that Y2K is going to have a significant impact right through the Supply Chain. Almost every company will either have to change some suppliers to maintain service levels or find new customers to maintain revenues. This means they will have to change the way they do business in 1999 to some degree just to keep the status quo. And inevitably, this will be necessary during the implementation of the new applications.

As a result, the applications they chose must be highly flexible and adaptive to change as well as quick to implement.

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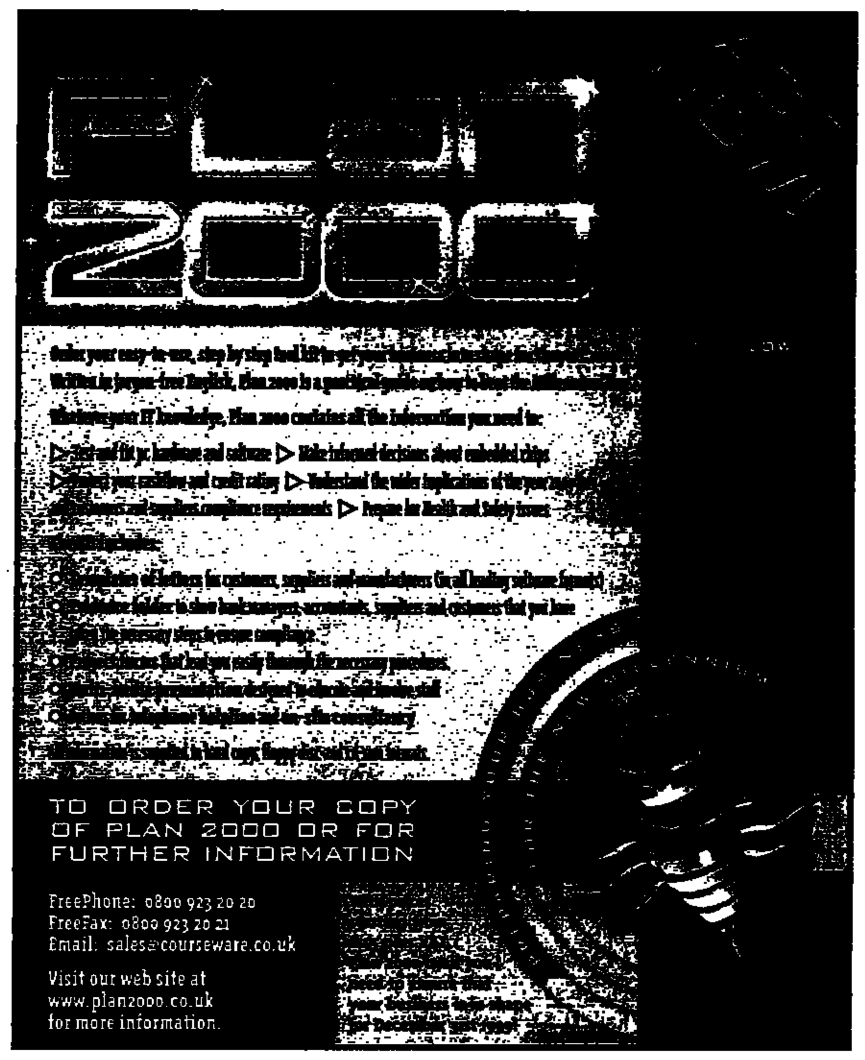

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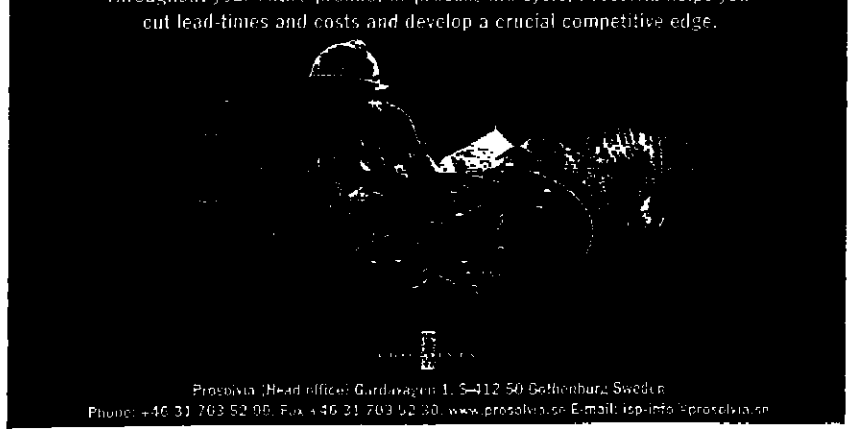

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ACADEMIC VIEWPOINT: HARVARD PROFESSOR JAN HAWKINS

The challenge is to match educational needs with computer power

Intelligent use of information technology can help the learning process, but traditional teaching methods will continue to play a vital role in and outside the classroom, says Jan Hawkins, interviewed here by **Victoria Griffith**

US schools spend hundreds of millions of dollars each year on technology. Hooking every American classroom up to the Internet has been a priority of the Clinton administration. In a recent US Education Department survey, parents placed technological skills just below reading and writing as the areas their children most needed to master to ensure a successful future.

Yet the case for improving education through technology is still weak. Two months ago, a *Boston Magazine* survey showed that in the New England area, state schools spent much more than preparatory schools on technology; their scores on standardised tests, however, were far lower.

So is technology a waste of money or the panacea for a troubled school system?

Neither, according to Jan Hawkins, a guru of technology's impact on learning and a professor at Harvard's School of Education. "Technologies themselves won't bring revolution," says Ms Hawkins. "Scores won't magically *rise* when you put computers in the classroom. But computers can help people to learn."

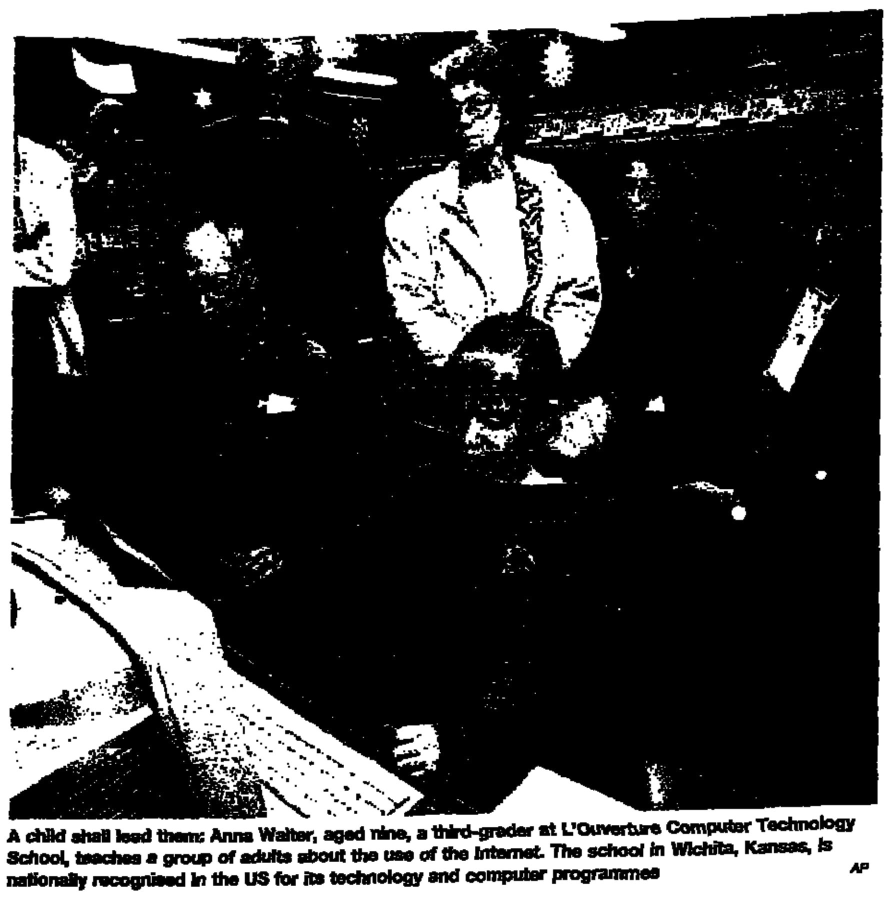
In fact, they are doing so in some unexpected ways. Many people, when they envision technology in the classroom, think of the computer itself as a teacher. A child may be seated in front of a sophisticated maths software program, for instance, to gain supplemental instruction. "While some educational software is good," says Ms Hawkins, "such programmes are a poor use of expensive technology. Using technology in that way does not boost examination scores."

Some of the best uses of technology, in fact, do not involve the child at all, Ms Hawkins points out. At US schools, for example, teachers and administrators have used the technology to good effect by reducing paperwork, thus freeing up time to spend on instruction.

Universities are relying on technology to cut through red tape as well. At the Wharton School of Business at the University of Pennsylvania, students use an Intranet to register for courses, download course assignments and deliver homework.

Improved communication, through the Internet, has also proved a powerful tool for better learning. Ms Hawkins points to the experience of the Union City school district in New Jersey. In the early 1990s, Union City's school district was distressed. Test results were so bad that the state had threatened to take over its administration. Officials knew major changes were needed in curriculum, scheduling and teaching methods.

At the same time, Bell Atlantic, the US telephone company, was looking for a school to use as a test case for new technology like the Internet. The school was wired, and computers were installed in every classroom. Test scores improved dramatically.



A child shall lead them: Anna Walter, aged nine, a third-grader at L'Ouverture Computer Technology School, teaches a group of adults about the use of the Internet. The school in Wichita, Kansas, is nationally recognised in the US for its technology and computer programmes AP

Union City has become such a success story, in fact, that it has become a model for the use of technology in the classroom. But perhaps the biggest surprise in the experiment is that much of the added learning did not take place in the classroom at all.

"One of the most important things that happened in Union City was that Bell Atlantic connected the parents to the system as well," says Ms Hawkins. "Every seventh grader was given a computer to use at home, and the parents, as well as the kids, were trained in how to use it."

As a result, parents became far more involved in their children's education. They used the Internet to find out if their children had homework, then made sure assignments were complete. Through e-mail, they were constantly appraised of their children's performance, and so were able to respond much more quickly when problems arose.

The Internet also improved student-to-student, and teacher-to-teacher communication at the Union City School. Through e-mail, teachers were able to collaborate far more easily on interdisciplinary projects. Students began to send each other e-mails as well, sometimes just to gossip.

"One of the big surprises was the impact the technology had on writing skills," says Ms Hawkins. "The kids suddenly had an incentive to actually put their thoughts into words. Having an audience made a big difference." In fact, Union City school children now outperform other students in the area in writing skills on standardised tests.

The stakes of technology in education are rising. The cost, once Internet connections and multimedia equipment are taken into account, is far higher than it was when computers were simply used as word processors. Expectations of what technology can do for learning have also been elevated by the advent of the world wide web, video-conferencing, and other tools.

Success stories abound, says Ms Hawkins. Business schools and medical schools

Jan Hawkins says 'the stakes of technology in education are rising'

are among the best users of technology. "Medical schools, in particular, have made great use of simulations to help students learn," says Ms Hawkins.

"Computers can help you see how all the parts of a system impact each other at once. That's very difficult to do in lecture or textbook form."

Yet teachers and administrators have also made many mistakes. "I've seen computers just sit in boxes because teachers couldn't figure out what to do with them," says the Harvard professor.

The situation is improving, however. Most schools, for instance, have learned that training – of the teachers, administrators, even parents – is necessary in order to take full advantage of the technology. Yet Ms Hawkins says she still sees a lot of waste: technology and computer programs that are not integrated with the rest of the curriculum, systems that are used heavily by a few teachers and all but ignored by others.

"I see the most serious mistakes happening less," says Ms Hawkins. "But we still haven't come completely to terms with how best to use technology in the classroom. Computers can be oversold as a magical device. In reality, they can be an enhancement, but not a replacement, for non-technology-based learning."

FT IT

Themes for 1999

Details of forthcoming issues of the FT's monthly Review of Information Technology appear on page 14 of this issue.

RAY HAMMOND: IT guru

Europe 'could steal a march on the US'

From page 14:

her best friend to call the HR [human resources] office and find out about maternity benefits. The HR person takes the call, goes to the file and puts a leaflet in the post. The whole process takes about 45 minutes and involves three people. Set that against a click on an HR web site which one person can do in a few seconds, all on her own."

The point is that enterprises today are filled with this kind of time-sapping routine, accepted as necessary but actually relentlessly dulling the efficiency and creativity of processes that should enhance the business. If the IT industry is to be characterised by anything over the next five years, it will be in the wholesale automation of these unglamorous but critical transactions.

But let it not be said that the IT business is unexciting or that Europe's second place is set in stone. It is possible that in the next three years Europe could steal a march on the US and overtake it. The reason follows from contemplating what the next "killer application" could be.

"It will be a hand-held 'something' – no-one can know the language of the future," says Mr Hammond.

The "something" will be the device that best exploits the convergence of wireless telephony with the Internet and the perpetual power of technology to miniaturise, especially through processors capable of voice recognition. "Anything without a keyboard stands a great chance."

One of the most intriguing things about this device is that it will require a new operating system and set of standards. The standards could be Europe's next generation GSM (global system for mobile communications) due out in 18 months' time and Mr Hammond believes these could win out over the US equivalents.

GSM has performed well in the massive markets of Asia, potentially turning the technology into the platform of choice for billions of people.

In the battle over operating systems, Psion of the UK and its fellow members of the Symbian consortium – Nokia and Ericsson in Europe and Motorola of the US – could pull the rug from underneath Microsoft's feet in this arena.

"I am not saying that Windows is going away. But Gates is increasingly unable to contain the IT container. There could be a shift in the balance in favour of Europe."

Mr Hammond could hardly be more approving of the favourable position that Britain is creating for itself. He thinks Peter Mandelson, who resigned just before Christmas as UK trade and industry secretary over his personal financial affairs, was "spot on" with his approach.

"I watched the Queen's Speech [at the opening of parliament] and the electronic commerce bill was the first item of business. That is very significant." There are still substantial hurdles for Europe to overcome; notably the thorny issue of indirect taxation.

But, at least according to this IT futurist, the signs are that Britain's New Labour government has fully understood the potential for the UK economy if it can become the digital leader in Europe. The impetus now needs to be maintained.